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ORIGINAL ARTICLES.

THE HEALTH RESORTS AND BATHS OF EUROPE AND AFRICA.*

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INTRODUCTION.

In commencing a series of articles on climate in relation to health, I feel sure my American confreres will allow me to explain the reasons which have induced me to write these articles on a subject about which so many books have been already written, and by men of intelligence and professional repute.

In the first place, I may remind my professional brethren that, though the literary merit of many of the "guide books of bathing places and health resorts of Europe" is of the highest order, there is such a very great discrepancy as to facts that one can only conclude that these books are merely copies of other books, but with variations to give a fresh charm, from a literary point of view, to the reader, but with the same inaccuracies and the same incompleteness as are found in the originals. Secondly, the hundreds of thousands of Americans and others from the United States who cross the Atlantic to "do" Europe, or in search of health, demand practical, reliable information as to the hundreds of spas and health resorts of Europe, Algeria, Egypt; and it is to supply this want to the public through the medium of the members of our noble profession that I have decided to give to the medical world the results of my personal observations, impartially. I hope they will be received in the same catholic spirit in which they are given. A writer of a guide book is very liable to be influenced by many circumstances unknown even to his own mind; his personal knowledge of one or two places only leads him to see those particular places "couleur de rose," or if a practitioner, in a particular locality, he sees all the advantages of the place, but the drawbacks from an impartial standpoint are often obscured to his vision. I could give many instances of this, were it necessary, but I am certain that many of us have been struck by the same fact.

Now, what is the necessary, the primary condition under which a man can write with accuracy and impartiality on any subject? Is it not that he should have personal knowledge of the subject? And what does this mean when we come to the enormous subject of baths, health resorts and climate? It means either that a man must

merely compile a book from other books or else spend many years of his life and a very large sum of money in travel and observation; and not only so, but he must have also a broad and scientific education, and he must be able to see the practical results, the success or otherwise of the therapeutic use of any given waters, or the benefits or otherwise of any given climate. At once it can be seen how very few men can give themselves up to this long work, and I may frankly say that but for special reasons I should never have been able to spend eleven years in travel and study, and be able to give my medical friends the benefit of my observation and experience. Therefore in the following articles I shall endeavor to lay before and at the feet of the profession the impartial facts collected by me during those years of travel and toil. I consult no books; I hide no facts; I suppress no truth. My aim being to furnish to the profession information which can be relied on, I may come sometimes into conflict with received opinions, with guide-book statements and local or personal interests; this I regret, but cannot help; the only reason for such articles would be destroyed, were I to be influenced by any such considerations. My duty is to my profession, and through them to the public. My style and the literary merit of my articles may be open to free criticism, but the accuracy of my facts I have taken every means to render beyond serious or just attack, and, in conclusion, permit me to add that the mistakes constantly made (with the most direful results to patients) of sending people to unsuitable climates in Europe may be in a large measure avoided in the future, if the facts I hope to place before you in the succeeding numbers of the NEW YORK MEDICAL TIMES, are kept in mind.

If any confrere desires special information in respect to any particular climate or spa, he has only to write to me and I shall be ever ready to aid him to the fullest extent within my power, since my object is to advance scientific and accurate knowledge of European health resorts, and furnish doctors and patients alike with the best and latest information on this wide and important branch of our great profession.

I.

SEDATIVE CLIMATES.

PAU, ARCACHON, BAGNERES DE BIGORRE, ANDORNO.

In dealing first with that class of climates called "sedatives," I have mentioned the four best known and most typical stations of this class in Europe. Indeed there are no other stations besides these four which can be termed really "sedative," if we except several small isolated places

in the French Pyrenees and in the North of Italy (Piedmont) which, however, otherwise useful from a therapeutic point of view, possess neither accommodation or sanitary conditions which would permit them to be recommended as health resorts.

I take *Pau* as a typical example of a sedative climate, giving at the end of this article the differences and special features of the other three.

Pau is an old town situated in the Basses-Pyrenees, 650 feet above sea level and overlooking the valley of the *Gave*. It was a town of the first importance (the capital of the kingdom of Navarre) and the birthplace of Henry IV. (1553), but since those ancient days it has become of less commercial importance, though of great historical interest. Its streets are said by guide books to be well kept, but a very good knowledge of the place leads me to conclude that they must have been specially swept and cleaned for the guide book man's inspection, if that gentleman ever saw the place at all. Worse kept streets it would be difficult to find in a town of its size, with narrow uneven pavements, in streets so narrow that often one is covered with mud from passing carriages or peasants' carts, while to walk or to bicycle in the cobble paved roadway means torture to the feet or rapid damage to the bicycle. The roads outside the town, on the contrary, are among the finest and best for walking, riding or bicycling, and patients can enjoy exercise without any great fatigue, the roads for miles around being almost flat, and particularly suited to those who cannot walk up hill. The sanitary state of the town as a whole is good. The drinking water of *Pau*, however, is open to grave suspicion, owing to the parsimony of the municipal authorities in not replacing the porous pipes used to bring the water supply from a distance into the town by iron ones. Frequently after heavy rainfall the drinking water is discolored. *Pau* lives on its past reputation, and the municipality so far appears to do more to repel visitors than to attract them. There are several good modern hotels in *Pau*, with excellent sanitary arrangements, where patients and visitors can find all that can conduce to comfort and well being. The Hotel *Gaseion* is luxurious, well placed, overlooking the valley and faces south; it is well managed. The Hotel *de France* is noted for its first-rate cooking, and the proprietor gives attention to the dietetic requirements of invalids. The Hotel *Beau Séjour* is magnificently placed, faces south, has large, airy rooms, and the prices are lower than in the other two already mentioned. There are several smaller but comfortable hotels and pensions (as the Hotel *de Poste*, Grand Hotel, etc.); and many charming, well placed villas to be let. I should recommend very strongly any one taking a villa however to engage some competent person to examine the drains before signing any contract, many of the villas being most unsatisfactory in this respect, and serious cases of illness have resulted from defective sanitation in villas. The apartments and furnished lodgings are generally dear, dirty and uncomfortable; still, there are apartments in the neighborhood of the Grand Hotel,

and in the Rue d' Orleans, which are very comfortable and clean, but they are the exception. The prices of food stuffs, meat, fruits, etc., is moderate; the wages of servants are extremely moderate. Any family taking a villa or apartment for the winter will have no difficulty in finding servants, and good ones. But the tradespeople are very conservative and wanting in business energy, and will give themselves no trouble. Hence, housekeeping is not the most easy thing always, in a *Pau* villa or lodging; yet many American families live in villas, and some distinguished families and leaders of society at *Pau*, such as the family of Colonel John Nelson Potter (a brother of Bishop Potter) possess their own handsome and well appointed villas. There are many more American and French families than English to be found in the winter at *Pau*. Society is good, and completely free from the "shady" element which is the drawback to many of the Riviera health resorts. Horses, carriages and bicycles can be hired very cheaply by day, week or month; they are good and well kept. There is hunting, golf and tennis for those who desire amusement. There are excellent English pharmacies where American and English drugs and specialties can be obtained. Mr. Tarvis is the principal one; and not only are the prices reasonable when compared with other continental English and American chemists, but some special professional work at *Pau* enabled me to form an opinion as to the accuracy of the dispensing done at this pharmacy. I may here add that American visitors to Europe cannot be too careful as to where they get prescriptions prepared or buy special or patent preparations. I have seen cases of poisoning both in Paris and other cities and towns in Europe from *improperly dispensed prescriptions*, while in other cases inert substances have been substituted for drugs ordered in a prescription, which the pharmacist did not possess. Mr. Tarvis not only is a pharmacist, but an intelligent man who is ever ready to give freely information on any point to Americans coming to the town; a resident of thirty years, he is able to give many useful hints as to houses, lodgings, etc.

There are several doctors (three English) and a first rate American dentist (Dr. Edwards) practicing at *Pau*. There are frequent trains to Lourdes, Biarritz and other places of interest within two or three hours' rail. Paris is fourteen hours by express train. The station is like the town in general, badly kept; the usual difficulty in obtaining any special carriage without paying exorbitant charges is experienced here as at every other station on the Chemin-de-fer du Midi, which I believe is largely responsible for the decline in the prosperity of this region. The station officials, however, are very civil, and do all they can to lessen the enormous difficulties with which they have to contend.

Having now given the facts as to what may be expected of *Pau* from a social and sanitary standpoint, the next consideration is the therapeutic one.

The season at *Pau* is from the middle of Octo-

ber till the first of June. The month of October is generally warm and delightful; April and May are the best months of the year. The month of December is generally very wet; snow often falls in January and February. The average winter temperature is 43° F.; there are 118 rainy days in the year, and the rainfall is 43 inches. From this, it will at once be seen that Pau is a *humid* climate. The great point in the climate of Pau (and equally so in the other three stations), is its freedom from wind; summer is too hot for visitors.

What do we mean by a sedative climate? It is not a windless place, nor a humid place, nor a flat, low lying district or a slightly elevated plateau; because many places, such as St. Moritz, Davos, etc., are free from wind to a very large extent, yet they are the reverse of sedative. In the North of England and West of Scotland there is a greater rainfall and more humidity, yet that does not constitute sedation. A sedative climate, as Pau, must have these various conditions combined with an indefinable "something," some atmospheric quality added, which gives it its special therapeutic value.

The effect on persons going first to Pau is a depressing one, an indisposition to walk, a lessened appetite, a tendency to sleepiness and a readiness to perspire; the bowels are liable to act irregularly; the pulse rate is slower and its force is diminished; the blood pressure in the arteries is lowered. These are the general effects observed in most persons during the first fortnight. Soon the patient becomes acclimatized and the depression passes off.

Therapeutic Indications.—Purely nervous or spasmodic asthma is very speedily relieved by residence at Pau, the attacks becoming less frequent and less severe. On the other hand, cases of bronchial asthma do not, as a rule, do well here; the mucus is increased in quantity; the digestive organs become very seriously deranged, and the patient feels a general sense of increasing illness. But cases of sub-acute and chronic bronchitis, as well as fibroid disease of the pulmonic tissue, often improve very much after a winter at Pau, though much better results in this class of maladies are obtained by following up the winter at Pau with a course of waters and baths at Bagnères-de-Bigorre in May, the Labassere spring being the most valuable in Europe for these conditions, and the pure mountain air (1,820 feet above the sea), without wind, being cooler and more agreeable to patients. Cases of true tuberculosis should not go to Pau; these climates are wholly contra-indicated in this disease, where the only chance of recovery depends on an increased nutrition, seconding Nature's effort to repair damage and resist the inroad of infecting organisms; a dry, stimulating, sunny atmosphere, causing increased metabolism of the whole tissues of the body. Pau, by its very sedative action, lessens these nutritive and metabolic changes, and hence the vital force opposed to advancing active microbial disease is lowered.

The great value of Pau, I may say, indeed, its

unique value, is limited to three special classes of cases: First: *In neurotic conditions of the heart*, conditions which are often called irritable heart, weak heart, nervous palpitation and *false angina pectoris*. Secondly: *In the various forms of neuralgia*, whether facial, intercostal, or affecting the limbs. Thirdly: *In sleeplessness*, from brain fag, nervous headache, cardiac disease, or wakefulness from some ill-understood or occult cause (but in this latter class it is a little inferior to Bagnères-de-Bigorre). In these three classes of cases, these climates, without the aid of drugs, will often produce the most marvellous results, and patients sometimes recover their health as if by magic. To be asked to explain how, in cases of heart affections, in cases of neuralgia and sleeplessness, these excellent results are obtained or can be accounted for is to open out a wide field for conjecture and discussion, and that is beyond the scope of my article or space; but all these conditions are clearly associated with some abnormal, possibly some hyperesthetic conditions of the nerve centers, be it central or affecting such ganglia as the essential centers in the cardia septa or walls; the still air, the humid climate and the peculiar soft, soothing quality of the atmosphere affect the whole being. There is little variation of temperature, and under these combined conditions there are probably much fewer afferent wave stimulations passing towards the central nervous system, while the sympathetic nervous system is soothed; the vaso motor centers act with less uncertainty or force; the superficial vessels of the skin are evenly dilated and probably also the vessels of the larger glands; perspiration is most easily induced; and the circulation and condition of the nerve centers is in some way greatly modified; irritability gives place to repose and calm. This, I think, briefly may explain in some measure the results obtained from sedative climates; and when one looks at these facts, one cannot help being struck with the fact that these very conditions modified and relieved or cured by sedative climates, as Pau and Bagnères-de-Bigorre, are just those conditions which are aggravated by a tonic climate, such as St. Moritz, Davos or the Riviera, where the physical effects are exactly reversed. Pau, with the other similar climates, then, is of the *first importance* for that class of diseases due to functional derangements of the central nervous system, such as I have described, and in such cases is unique in Europe. It is of secondary importance in the class of chest affections I have already mentioned, but may, in suitable cases, be also of great value in these affections; but cases of active tubercular disease, in any stage, gout, rheumatism, affections of the kidneys, liver or stomach troubles, should never be sent to these climates. One of the drawbacks indeed, to Pau, is the readiness with which the digestive functions are disordered.

Bagnères-de-Bigorre, a very pleasant old Spanish-like town, with fine shaded walks, baths and casino, is an hour and a half by rail from Pau; is situated in the Hautes-Pyrénées, 1,820 feet above sea level; is superior to Pau in cases of sleeplessness. There are charming walks and three good

hotels. Season: 1st of May to 1st of November. English doctor.

Arachon, situated on the Bay of Arcachon, is placed at the end of the great forest which stretches away to the south for seventy miles. It is one hour from Bordeaux, ten hours from Paris. It is better suited to cases of facial neuralgia, emphysema, and those cases which have more or less disturbance of the digestive functions associated with neurotic conditions. The air is dryer, and the hotels and villas are among pine woods, sheltered from the wind. Patients should never (in winter) cross over the brow of the hill—in the direction of the summer town—because then they expose themselves to the cold winds, while in the forest (ville d'hiver, to which alone my remarks apply), no wind is felt. There are many villas to let, and the Hotel de la Foret is a comfortable and good house, also the Hotel Continental (in the forest). There are several excellent French physicians, but no English or American. Season 15th of October to 1st of June.

Ondorno.—A beautifully placed North Italian village, half an hour's drive from Biella and two hours and a half by rail from Turin, is only a spring and summer (which is rather hot) and early autumn station, but perfect as climate at those seasons. The Grand Hotel d'Ondorno is well kept, and Mr. Zella, the proprietor, speaks English and is attentive to visitors. There is an English doctor residing in the hotel. The surroundings are very fine. Mountain scenery, good fishing, with a calm and fragrant air, and a delicious sense of repose are the special features of this North Italian resort.

ELEPHANTIASIS. (ARABUM.)

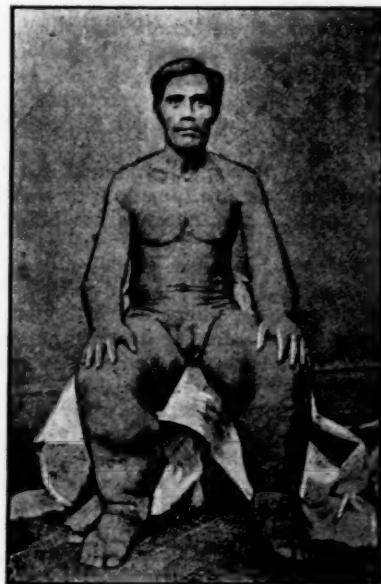
By C. C. MAPES, LOUISVILLE, KY.

NOT often does a member of the laity exhibit the temerity, or have the disposition, to offer contributions to medical publications; especially is this true when applied to a condition which is so infrequently encountered in this part of the country as elephantiasis (arabum). And the writer's only excuse for perpetrating these remarks is the following letter from a gentleman who spent about twenty years among islands of the southern seas, and the photographs handed me, from which the cuts were prepared. The letter contains several points of interest, and I therefore give it verbatim:

"In handing you the enclosed photographs of Y. X., native Samoan, who has been the subject for years of elephantiasis, I give you a brief history elicited from the man himself, and a few ideas relating to the disease, gleaned from inquiries and observation in Samoa, Africa, etc.

"Y. X., is a native of Apia, (Upolu), Samoa, (Polynesia). I first saw him in the sixties, while on a cruise to the Island of Samoa in trading interests, and met him also on several subsequent trips of a similar nature. The history is that he first noticed an inflammation and swelling of the

lower extremities at the age of fourteen years, which persisted with periods of exacerbation and slight amelioration, but without pain or other symptom, until he reached the age of twenty-three, when the first picture was taken. (See cut No. 1). The progress of the disease from that time until the age of forty-seven, when the second photograph was taken, will be readily observed by cut No. 2. His general health did not suffer; he was able to get about fairly well, although his ridiculous attempts at locomotion, carrying the enormous pendulous scrotum, can be better imagined than described. As I have indicated his general health was unimpaired; he ate and slept well, and all functions of the body were properly performed. He married at eighteen, and within the six succeeding years his wife gave



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birth to three healthy children. On my last trip to Samoa the father, mother and children were still living, none of the children having exhibited evidences of elephantiasis. So much for the history.

"Although it has been several years since I saw this man, elephantiasis has not died out in the Samoan Islands, as I have seen other cases on subsequent visits there and elsewhere in the tropics.

"I am told it is a remarkable fact that elephantiasis invariably begins at the toes, thence making its way up to the knees, later spreading to the thighs and forearms, and finally affecting the scrotum in the male, and the labia of the female. This was the course of the case represented by the two photographs. The mystery surrounding the disease seems to be exactly how it originates, and why it attacks only certain individuals. As already indicated, it is not limited to the male, but also attacks the female with

greater or less frequency. It is said not to be hereditary, nor is it contagious. There appears to be little or no odor emanating from the affected parts, nor have I ever observed an abrasion or ulceration of the skin over the thickened area.

"Another feature sufficiently peculiar to be worthy of mention is that the disease in its progress never attacks a vital organ, nor have I known death to result directly from its effects. Persons having elephantiasis are otherwise in apparent good health, and only suffer the inconvenience of carrying about the enormous weight of hypertrophied tissue.

"The most extensive case that I have seen in all my travels occurred in the person of an Ethiopian (Africa), aged seventy years, whose 'wool' was perfectly white, and who had been the subject of elephantiasis for upwards of fifty years. His lower extremities had become simply enormous, and when standing erect the scrotum nearly touched the ground.

"I have encountered the disease in the Samoan Islands, in the Caribbean Islands, and in certain districts of Africa. I have seen in all perhaps fourteen cases. I also understand it is quite common in the interior of China. It does not seem to be strictly climatic. As to its relative frequency, for instance, in the Samoan Islands—given a village of 2,000 to 3,000 population, and there will often be found five or six cases of elephantiasis.

"The nature of the disease does not appear to be dropsical, aspiration revealing only the normal fluids of the body, blood, lymph, etc., and the enlargement is as firm and solid as other parts of the body, being simply an excessive hypertrophy.

"If you wish to use this information, or the enclosed photographs, you are at liberty to do so."

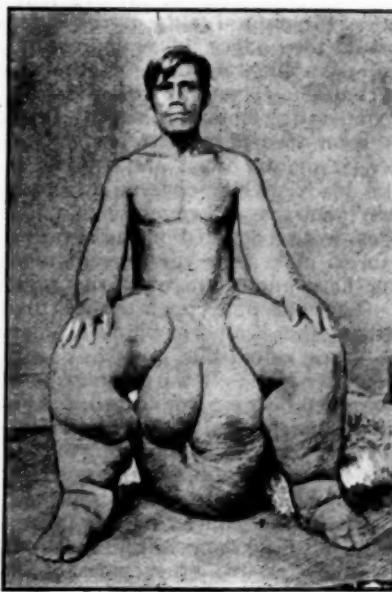
Referring to the literature of the subject, we find that elephantiasis arabum is a term applied to "a chronic endemic or sporadic and circumscribed hypertrophy, involving both the skin and subcutaneous tissue with inflammatory obstruction of the blood and lymph channels, resulting in gigantic enlargement of the part affected.

"The disease occurs in India and some other countries as an endemic disorder; sporadic cases are also found in regions where endemic forms are never seen."

Several well-marked cases of elephantiasis have been observed in this city during recent years. Some have been seen in the Louisville City Hospital, others in the private practice of our physicians. The writer saw (in this city) four years ago, a case occurring in the person of a negro boy, perhaps twenty years of age, both lower limbs (to the knees) being involved. If I remember correctly, the measurement of each was about eighteen inches around the calf. The hypertrophy was quite extensive, the skin hanging in unsightly folds just above the ankles. When I last heard from the case, the thickening process had not extended above the knees, and the boy was otherwise in good health, although there had previously been more or less serious constitutional disturbances associated with this trouble. As to the treatment employed in this particular case I

have no knowledge. I understand in another case seen here, where there was extensive hypertrophy of one leg only, amputation was performed at the hip, and the patient died a few weeks later from an intercurrent affection.

"In the regions where elephantiasis occurs in endemic type, there is usually recognized a prodromic stage, characterized by febrile temperatures, alternating with stages of sweating, extreme distress, and severe lumbar or articular pains, with or without such febrile stage. The part most often involved—usually a lower extremity, rarely two at the same time, more particularly the leg and foot, and rather more rarely the thigh and the buttock—is affected with a vivid redness and swelling, and becomes painful from the tension of the part, due to infiltration of the subcutaneous tissue. In many cases the dis-



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order suggests an erysipelas, and such, in fact, it often is, the streptococcus erysipelatis being responsible for the mischief. In yet other cases it is obvious that the lymphatic system is chiefly involved, the lymph vessels becoming tumid and tense, and, when punctured, giving exit to a chylous or milky discharge. In some cases other regions than the extremities are involved, chiefly the genital organs in the two sexes—the penis and the scrotum in men, the labia majora and minora and the clitoris in women. In the same manner the upper limbs, as well as the regions of the face, including the brows, the cheeks, the ears, and other regions of the body, may be involved. Other symptoms than those described occur as a result of the anatomical situation and configuration of the involved portions of the body; for example, intense inguinal pains and reflex neuralgia of the spermatic cords, pains in the sciatic and gluteal regions

in disorders of the scrotum, in which cases also there may be the production of a hydrocele. Variations occur from the types suggested, in which the part, instead of being red and tumid, is white and shining, the skin remaining apparently unchanged, or being somewhat oedematous. In other cases it is thickened and adherent to the tissue beneath, and destitute of its normal elasticity and pliability.

"One of the striking features of this disease is its evolution by accesses. After a febrile exacerbation with an increase in the tumefaction, with or without an erysipelatous or lymphatic involvement, or inflammation of the veins, there usually follows amelioration of all the symptoms. Sooner or later, however, in all typical cases, there is a recurrence, sometimes in exaggerated type, of all the preceding morbid phenomena.

"In well-marked cases of involvement of the leg, some of the natural folds of the skin are so increased as to produce linear depressions, even at times resembling crevasses in the tissue, in which accumulate secretions from the skin undergoing degenerative metamorphosis. The integument is soon transformed to an unwholesome tissue, tense, smooth, bluish and shining, of dirty-brown or blackish hue, covered here and there with warty growths and vegetations, or the seat of changes best recognized in the severe and advanced forms of eczema verrucosum, ulcerations occurring here and there over the regions involved. These at times open the vascular channels, so that either lymph or blood escapes freely. In some cases keloid-like growths develop over the surface, the glands in the neighborhood of the region involved become implicated; the bones enlarge in all dimensions, and the unwieldiness of the part is one of the most annoying of the results. As a rule, the subjective sensations, when inflammatory complications are not present, are slight, though during the course of the inflammatory process the pain and the resulting sense of tension are very great. When other parts of the body than the extremities are involved, the bulk of the organ may be increased to the extent noticed in elephant leg."

This is true of any part of the body that may become involved.

"When the affected parts are incised they are found to be throughout indurated, the density of the mass being uniformly present in all the superficial and deeper tissues. The color in general is grayish and yellowish; the appearance that of tissue which has undergone lardaceous, fatty, or gelatiniform transformation. Lymph can be in places expressed on pressure. Hypertrophied fibrous tissue constitutes the bulk of the mass, above which often stretches an epidermis scarcely thickened in abnormal measure. In some portions of the densely hypertrophied subcutaneous mass, the reticulum of fibrous tissue is lustrous and sclerotic; in others it is soft and apparently in a state of semiliquification. Lymph spaces, at times distended considerably with a clear or turbid lymph, occur here and there in the mass of all typically involved structures. The blood and lymph vessels, nerves and nervous sheaths, and even the

underlying osseous structures, participate in the general sclerotic hypertrophy and cell infiltration. The muscles and cutaneous glands may or may not take part in the morbid process."

"The morbid anatomy points with clearness to obstructive disturbances in the vascular channels, with resulting oedema, and lymphatic or serous effusion. The remote results and occasional accidents of this obstruction are readily explained when the frequent repetition of the effective cause is considered. In the endemic cases this obstruction is produced by the blocking of the lymphatic channels by the filaria sanguinis hominis. It is supposed that mosquitoes are the carriers of the embryos. The parent worm inhabits the lymphatic trunks, and its ova are thence swept into the general circulation. The supposition is that the greater the obstruction by the parent worm or its embryos, the more severe the elephantiasic symptoms, resulting, in the graver class of cases, in bursting of the vessels distended below the point of obstruction, and a consequent lymphorrhagia or hemorrhage. In the milder cases the circulation is in part preserved at the point or points of greatest interference with the lymph or sanguineous current."

As has already been indicated, elephantiasis occurs in all countries and all climates, but is most commonly met with in the tropical regions, and affects more men than women, it is said, in the proportion of about four of the former to one of the latter. A few congenital cases have been reported. Dark races and persons living in unfavorable hygienic surroundings are unquestionably more likely to exhibit evidences of the disease. "An argument has been made to show that the disease acknowledges the geographical distribution of the mosquito."

In the earlier ages the prognosis of elephantiasis was very grave; its chronicity was regarded as its most characteristic feature, and its curability was largely questioned. Its duration was thought to depend in the majority of cases entirely upon the length of time the affected individual lived.

But "the resources of modern medicine and surgery have changed the prognosis of elephantiasis. Even the worst of cases may be wonderfully improved, and often wholly relieved, by appropriate measures. The endemic cases are greatly benefited by a change of climate."

There have also been some most radical developments as regards treatment in recent years. Formerly, when the disease was not so well understood, clinically as well as pathologically, as it is at the present day, all methods of treatment, surgical or medical, were looked upon with considerable uncertainty and skepticism. The latest authority I have been able to find states: "During the febrile accesses of the disease, those which precede its earliest manifestations and those which so often accompany its evolution, the patient is to be given the usual cooling draughts and the antithermal remedies which have been found effective in the management of fevers in general. The hygienic management of these cases is of the highest importance, and often in-

volves a change of climate and a residence where the disease is not endemic, and where also there is an absence of malaria, of much dampness, and of vitiated air."

"The local treatment of advanced cases is by excision, with proper surgical precautions, of all the larger tumors. In this way growths of several hundred pounds' weight have been removed. In the case of genital tumefactions the penis and testicles have been carefully dissected out from the sulci in which they are lodged, with the result, after cicatrization has been accomplished, of leaving these organs unimpaired. Ligation of the larger vessels, as inducing still further obstruction of the vascular channels, is now practically abandoned as a therapeutic measure. The aid received by compression with the elastic bandage is in most cases considerable. Persistent compression of affected parts has been continuously employed for long periods of time with excellent results. Bandages for this purpose are preferably made of rubber, but have been effective when made with flannel cut on the bias, and even with the ordinary roller bandage of the surgeon, applied over compresses. Methodical compression of the vessels supplying an elephantiasic mass has been in cases successful, and in others followed by gangrene. Inunctions with mercurial, salicylated, tarry, and other medicated ointments, are often indicated, and in some cases serve an exceedingly useful purpose. Alternations of hot and cold local baths, steaming and showering the parts, massage, and the use of the constant electrical current have all been employed with advantage."

The gentleman who kindly handed me the two photographs illustrating the case presented, says nothing concerning the treatment instituted for relief, nor have I any knowledge as to what measures were followed, but the native's appearance would indicate that whatever the treatment may have been, it did not limit or check the progress of the disease. Excision of the scrotal tumor in cases where it has reached this magnitude might be recommended.

Referring again to the question of causation: If, as has been stated, the cause of the vascular or lymphatic obstruction in these cases is to be found in the filaria sanguinis hominis, and that its embryos are transported through the medium of mosquitoes, the question might naturally suggest itself, Why does not the disease occur with even greater frequency in those countries where mosquitoes, numerically speaking, are so abundant? And why does the disease attack only certain individuals, while other members, it may be, of the same family, enjoying the same environments, eating the same food, etc., remain exempt? Further, might not the question also be appropriately asked, in those cases where "the streptococcus erysipelatis seems to be responsible for the mischief," are also the filaria sanguinis hominis and its embryos or ova found, and *vice versa*? If this be admitted, or proven, can we assert positively which is the *fons et origo mali*?

Energy is an absolute requisite to success.

THE HYPNOTIC POWER: WHAT IS IT?

BY HON. ABRAM H. DAILEY, BROOKLYN, N. Y.

IT seems absolutely essential that publicity should be given to everything and anything which will throw light upon the mysterious hypnotic power, which undisputedly is possessed to a greater or less degree by every human being. I might even go further and say, that there is much to indicate that this power does not begin or end with man. What it is, and how it operates, are matters which have never been definitely solved, and hence are open to consideration and investigation. Inasmuch as it has been reasonably demonstrated that it is a power exercised by force of will on the part of the hypnotist directly upon the hypnotic subject, it is certain that the operator sends a potential force to and upon the subject, which, for the time being, overcomes and subverts his will, and in some instances puts his mental faculties in operation upon a false conception of facts, conditions and surroundings. All this has been reasonably demonstrated. Of late much has been said of the exercise of the auto-hypnotic power, which simply means the ability of the hypnotist to subject himself, or at least some parts of himself, to this mysterious force. It has been claimed by some that certain people, by the exercise of this power, delude themselves into the belief of conditions which have no existence in fact. I am inclined to believe that there is considerable foundation for this claim. I have been spending a portion of the summer in company with a gentleman, who for many years has been something of a student and experimenter. He has been able to render very material assistance to people suffering from nervous diseases and neuralgic pains, and has demonstrated to my satisfaction, that by the force of his own will, and a motion of his arm, or by a pass over the side of his face with his hand, that either his eye or arm, according to his will, could be thrown into a complete cataleptic state. To illustrate: I have seen him throw his right arm out in a horizontal position, pass his left hand over it, when it immediately became rigid, unbending, and presented a cold and clammy appearance and condition. In this condition it would remain for hours, unless he, by the exercise of his will power, and the backward passes of his left hand over the right arm, restored it to its normal condition, and the same was true with reference to his eye and the side of his face. He claimed that the arm and side of his face was devoid of the sensation of pain, and I have no reason to question his statement.

Dr. C. W. Hidden, of Newburyport, Massachusetts, possesses the hypnotic power to a marked degree, and during August last I was present when he gave some exhibitions of it, and I listened to his lectures with great interest. He put forth one remarkable claim, to which I especially desire to call attention. It is a very important matter, because it bears upon the question of the responsibility of both hypnotist

and subject in a certain class of cases. Dr. Hidden claimed that as the result of repeated experiments, he had found that he possessed no power to induce his subjects to commit an act of immorality, a dishonest act or a crime. He claimed that a virtuous woman could by no power of the hypnotist be induced to commit an immoral act, and he also claimed that an honest person could not be induced to commit a crime. He mentioned several instances where, in the presence of others, he had made rigid tests, and in the instances of the ladies, the very first suggestion of immorality resulted in their recovering complete consciousness. He had succeeded in getting a subject to consent to break open a house and steal money, and had gone with the subject to the house designated, and when urged to pry open the window, he began making excuses, but finally consented to remain outside while the doctor should go in and hand out the plunder. The doctor commenced to pry open the window to force an entrance, when he saw his companion fleeing so rapidly across the field that he had great difficulty in overtaking him, and when overtaken he was found to be in a state of great fright, though evidently still continuing in the hypnotic condition. I did not understand him to claim that a person predisposed to immorality or to crime would be thus affected. The doctor certainly is a very intelligent gentleman, and if what he claims in these respects shall be confirmed by the observation and experience of others, it will be a very important matter in overcoming the objections of many persons to the exercise of the hypnotic power. It may be suggested that the subject was to some degree influenced by what evidently was the condition of the doctor's mind, to wit: that no act of immorality nor criminal deed was really to be committed. But this can have no more force than any other mental state on the part of the hypnotist, when inducing his subject to believe all sorts of absurd things to exist around him. For instance, when the operator places a can in the arms of his subject and tells her it is a baby, he knows that it is not, but the subject fully believes the can to be a baby. If he turns to her suddenly and tells her it is a serpent, she will become frightened and throw it down in the greatest terror. Most persons consider animal magnetism and the hypnotic substance—for substance it must be—to be identical. I believe this to be an error. It is very hard for many persons who are pretty well informed upon matters of every day occurrence, to realize that force is absolutely invisible, and that it may and does operate upon substances which are invisible also. Magnetism is an invisible substance, and I think that is properly denominated animal magnetism, which, without the exercise of the will, is transmitted from one person to another, usually from the strong to the weak. Some persons naturally possess this substance in large quantities, and transmit it with most beneficial results to the weak and ailing. It is something which may be transmitted from one to another, and oftentimes with beneficial results to both. Magnetic healers

claim to replenish all waste from the atmosphere and their immediate surroundings. Call it magnetism or what you will, it is a species of nourishment which Nature has provided for all and supplies to all, and as it can be transmitted with good results, the methods of transmission should be made a subject of careful study, and the adaptability of healers to treat persons of varying temperaments should be understood.

Is this magnetic current identical with the hypnotic current which the operator throws upon his subject? You may say I am assuming too much; that in fact there is no evidence that the hypnotist transmits anything; that he merely exercises his will power. Let me ask what we do know about the will power of man? How can it operate upon the faculties of another man unless by contact? Every movement of your arm in reaching for an object is directed by the will. By exercise of the will, substances are set in motion and produce anticipated results. Why then may we not with great certainty claim that thoughts are actual things, that the ego in man is the essential and eternal principle in life, setting in motion all the machinery of his physical and spiritual nature? That every man possesses will power cannot be questioned, and that he cannot in the nature of things exercise that power upon another man without a medium of communication, any more than he can move an inanimate object without contact with it, by something of a substantial character, is in the nature of things most certain. What is that medium of communication which the hypnotist uses? Is it animal magnetism, or is it a peculiar substance produced by the operation of the mental faculties and sent wherever the will directs? It is conceded by the ablest hypnotist that no one can be hypnotized against his will; that the subject must hold his will power in abeyance, thus permitting his mental faculties to become permeated with emanations from the mental forces of the operator, until a medium of communication is not only, in fact, established, but the mental faculties of the subject are largely under the control of the operator, who has them within his grasp. I do not believe that animal magnetism and thoughts are identical in substance. They probably bear some relation to each other of an important character, and this relation could appropriately be discussed in connection with what is known as Christian science.

I have but imperfectly stated my views upon these interesting matters; and in closing permit me to urge the importance of disowning any and all legislation upon a subject so important, and of which so little is known. Let all freely strive to fathom and solve the mysteries of the nature of man, and let no class of men assume that they can be more safely trusted with these investigations than any other, for class legislation is an abomination to a liberty loving people.

Dr. David A. Gorton, whose scholarly and scientific articles for the *Times* have been read with marked interest, will on his return from his summer outing, October 1st, remove from his former residence, 137 Clinton st., to his own house, 174 Clinton st., Brooklyn. Dr. Gorton has promised us an article for our November issue.

TELEPATHY—PSYCHOMETRY.

BY EDWARD CHECKLEY, BROOKLYN, N. Y.,
Author of "Physical Training."

TELEPATHY, or, as I prefer to speak of it, psychometry, a word coined by Joseph Rhodes Buchanan, M.D., in 1842, the better to express the character of what he termed a new science and art, being analogous to the words thermometer, barometer, electrometre and similar terms. As the thermometer measures caloric, so psychometry measures the powers of the soul. The power of this soul-measuring force is limited only by the extent of that which encompasses all things. I long ago became convinced that no matter how cunningly a person would contrive to hide his true self, his whole nature, ideas, disposition and purposes could be seen, felt and understood without any explanation being given other than that which his mere presence in the same room as the psychist would afford.

What Buchanan, in his work on psychometry says, I feel to be true: "That as a science and philosophy, psychometry shows the nature, the scope, and the *modus operandi*, of those divine powers in mind, and anatomical mechanism through which they are manifested; while as an art it shows the method of utilizing the psychic faculties, in the investigation of character, disease, physiology, biography, history, paleontology, philosophy, anthropology, medicine, geology, astronomy, theology, and supernal life and destiny, social progress, more important as to human enlightenment and elevation, than all the arts and sciences heretofore known. The dark underworld of intellect, in which the responses of oracles, the revelations of magnetic somnambules, the prophecies of the saints, the forecasts of the fortune-teller, the mysterious presentments, and sudden impressions, the warnings of death, calamity, or accident, and the mysterious influences attached to places, apartments, amulets and souvenirs, is illuminated by the light of psychometric science, and its phenomena made entirely intelligible; for psychometry demonstrates in man, and explains the mechanism of those transcendent powers which have heretofore defied the comprehension of philosophy, and have been regarded with defiant hostility by materialistic cultivators of mere physical science, while they have been welcomed by poetry, religion, and the deepest emotions which ally men to heaven."

There is almost unlimited evidence to prove that there is a means by which people communicate with each other at a distance, through a medium that has not yet been physically examined or seen, and I doubt that it ever will be.

This power to see, feel and hear not only all that has happened in the past, but to prognosticate part of the future, rests upon the skill of the psychist. I feel satisfied that by cultivating what I term the involuntary function of the mind, a mental daguerrotype of any place, thing or person can be got as perfect as the physical one of the features obtained by the agency of solar light. For to the true psychist whatever has been and

is, cannot be hidden, any more than written histories of countries can be read by those able to read all languages. The greater the thing desired, whether it be the mental skill of the mathematician, or the physical one of the musician, it requires a certain order of intellect to become proficient in them; so, too, in this field, old as life though it be, it is still new.

The two faculties of the mind principally cultivated are memory and imitation, and on the development of these two the ability of the individual depends, to reason, devise and make whatever they desire, or their position in life demands. These faculties I term the voluntary functions of the mind, and their effects, such as talking, laughing, walking, etc., etc., are as capable of being controlled as is any muscular movement of the body. These faculties predominate in the majority of the human race. The extent of their development depends upon the desires, environment and possessions of the individual. In consequence, those faculties of the mind which I term involuntary are in a state of absolute passiveness, and it is only when the individual becomes weak and diseased that the voluntary faculties become unable to govern the body; then the involuntary ones take precedence. The first sign of this mental battle (so to speak), is illustrated in delirium, when the past rises up and old scenes are reacted involuntarily by the individual, for, as he becomes weaker, the cultivated faculties are unable to assert themselves. In this phase of mental change the involuntary or psychic functions gain precedence, and the soul seems to grasp all that is contained within eternity. Though generally limiting its powers to those things which have been connected to the individual, such as holding converse with relatives who have died, or communicating with friends who are still living, but at a distance.

The inability of the individual to explain the reason, or exhibit such peculiar phenomena on their recovery of health, is generally excused, as being caused by unaccountable or supernatural means, and yet, if the peculiar function that enables the squirrel to know a season ahead that its food will be scanty, and thus provide a store in excess of its usual habits, were investigated, with the causes that enable fishes to leave in shoals a region which they had been in the habit for years of visiting, then if these faculties which enable these two distinct forms of animated matter to foretell coming danger in time to escape it were thoroughly understood, it is possible that instinct, as it is called, might be able to explain telepathy; for, if animal life, lower than man, possesses this faculty, and people in their last struggle with life show such peculiar phenomena, I am positive those who are in health can acquire the one and cultivate the other of these mental limbs, so to speak, that make things seem to many supernatural.

An instance of the lack of mental development is commonly shown in that inability to govern the movement of the limbs and muscles, even after the movement has been both illustrated and described, not because of any physical defect, but

through the lack of that mental development that enables the beings to call into play that part of their nervous system, will, or mind through whose medium they are enabled to accomplish the movement desired. So little is the mind developed, apart from those functions referred to, that even those scientifically trained in the study of the mechanism of the man, are, as a rule, unable to stand, stoop, walk or even execute the common action of breathing in a manner that is conducive to maintaining the general health, through the mental inability to govern their movements, and so, as physically, the majority of mankind drift like derelicts at sea, so too do they mentally starve, and develop unconsciously an amount of mental inertia that seems almost impossible to overcome.

In conclusion, I would say that as photographers succeed in producing a representation of objects which the physical eye can see, so psychometry, or telepathy, can reproduce all scenes and sounds that anything, animate or inanimate, has passed through. The power of the psychometrist to read and describe all that comes to him, through this faculty, is, as I have before stated, limited by his skill. As one musician is more skillful than another, so with the psychist. If the prevalence of this faculty among the medical and legal profession were a fact, it would be of incalculable benefit to the mass of mankind; for a true diagnosis in disease could always be made, and perfect justice in law be administered. That this science can be studied by any one who has the power to breathe or talk, irrespective of their birth or training, I am positive.

MARRIAGE AMONG INDIANS.

BY W. THORNTON PARKER, M. D.,
GROVELAND, MASS.

A RECENT writer on our North American Indians has stated that marriage, the bulwark of our civilized community, is lightly esteemed among savages, and that in some of the tribes communism as to sexual relation prevails, and that virtue and chastity are of little worth.

The writer does not state to which tribes these remarks apply. Evidently his information has been derived very largely from hearsay concerning decayed and disappearing tribes.

In a paper concerning North American Indian womanhood, published some time ago in the "Annals of Gynaecology," I have quoted from others, but I have done so only after years of patient personal investigation, with an experience dating back twenty-five years among many different Indian tribes. I must take strong exception to any statement which reflects on the general character of our American Indians. As one writer has stated it: "They are even more virtuous and more strict in regard to the marriage tie than the whites. Their women are compelled by custom and sentiment to be virtuous. It is positively erroneous to state that 'the sexual appetite in In-

dians is the uncontrolled and uncontrollable desire of the wild beast."

I refer, of course, in my writings, to the full blooded North American Indians. Statistics with regard to half-breeds are valueless. I have discovered another statement to which I am also obliged to take exception, and it is that "both local and constitutional forms of venereal disease abound among Indian women. The frequency of syphilis coupled with disease are almost synonymous terms." I recognize the fact that this is the popular notion, but it is absolutely false. To judge of the merits of statistics, personal experience is necessary, and it is not right to paint our aborigines in such hideous colors.

The great mortality among infants, and the prevalence of glandular and pulmonary disease among many of those who survive infancy, are sometimes used as evidence that it is venereal disease which has made such terrible inroads on the Indian constitution. Any one who has resided a considerable length of time among the genuine North American Indian tribes will be sure to recognize the unreasonableness of this statement. During a long residence at one reservation, only one case of venereal disease presented itself for treatment, and that was in a half-breed who had lately returned from a white settlement!

Our ideas depend upon the tribe from which we get our statistics. The genuine North American Indians are not the degraded people of New Mexico, Arizona, and Southern California, but will be found to be human beings possessed of the manliest attributes, believers in the Divine Being, whom they know and worship as the Great Spirit.

They are fearless, vigorous, manly, and, generally speaking, virtuous. The Indian's ideas of right and wrong are of such a character as to rouse our respect and surprise. To live among them is certain to develop mutual regard; and, in my high opinion of their general worth, I have but echoed the sentiments of the manliest and truest people it has been my privilege to meet.

No explorer has yet been able to hang his cap on the North Pole, nor has the chemist in his laboratory yet succeeded in reaching what may be called the North Pole of his researches, namely, the zero of temperature, or the temperature of celestial space. This zero has been defined as that point of temperature at which gas particles would give no pressure and have no volume, a condition which, it is said, would take place at a temperature of 274 degrees below the freezing point of water. Unlike the Arctic explorers, however, who have a number of roads open by which to approach the pole, the chemist has only one route by which to seek the chilly destination he seeks, and that is by the liquefaction of all the gases. This, the text-books state, has already been accomplished, but the chemist in search of the zero of temperature knows better. Though compressed hydrogen when expanded yields a mist, the victory over this baffling element has not been achieved, and as the experiments in this direction are difficult and costly, it seems probable that the explorers will reach the North Pole by balloon or otherwise, long before the chemists reach their zeroic temperature, the temperature of celestial space. One practical result the chemist names as a reason for his researches after the zeroic temperature is that should it ever be reached we could then completely transform heat into mechanical power, whereas at present we succeed in getting only about 10 per cent. so converted.

NERVE AND DRUG AFFINITIES.

By J. A. CARMICHAEL, M.D., NEW YORK.

AMONG the most incomprehensible of nerve and drug affinities are those that may be denominated elective. We have said that in the economy of Nature provision was made for all the evils that afflict man's body. In no respect is this provision more signally illustrated than in the elective affinities that unchangeably exist between certain organs of the body, and those certain drugs that heal and restore them from a condition of disease to their physical reconstruction and the re-establishment of their normal functional energies and activities. Moreover, may it be said, that in no respect does the law whose operations we have invoked—the law of similars—find more marked interpretation than in these very elective affinities. It would be an endless undertaking to note, even more than currently, the relations maintained through nerve and drug affinities, and would involve a review of the whole *materia medica*, so for purposes of illustration it would serve us to investigate a few of the most prominent and familiar associations, and endeavor to explain, if possible, how and by what agencies their effects are manifested. Let us begin with the specific affinity that is abundantly proven as existing between the *secale cornutum*, the ergot of rye, for example, and the uterine muscular fiber. Since its original use officially, the processes of the evolutions of chemistry have produced from it various active principles now well known, and which may be adverted to as sclerotinic acid, of which ergotinic acid is the largest constituent, scleromucin, trimethylamine, sphacelinic acid and cornutin. Of the two latter, according to Dragendorff, the acid causes gangrenous ergotism, the cornutin acting specifically upon the uterus, enforcing contraction of its muscular fibers. True that the active principles of ergot have extensive influences upon various portions of the body, inducing salutary effects when administered with due care, as also dangerously morbid results when its toxic properties are permitted to be exercised without antidotal restraint, and in the full measure of their toxic powers. We have but to cite of the last, some of the morbid effects of chronic ergotism; for example, the convulsive, producing tetanoid contractions of various muscles, vertigo, obscurity of vision, loss of hearing and smell, and even death by chronic convulsions and exhaustion, as also its gangrenous effects upon the limbs, nose and other portions of the body. In these few and imperfect words, representative of the area of action of this drug, we have more than enough of a speculative interest as to the physical nature of the agencies within the body wherein its affinities are manifested. Let us investigate in due order some of these agencies, beginning with their promotion and maintenance of the vigorous and spastic contractions of the uterus when under ergotin influence. Whence comes originally the force that produces what is called muscular contracti-

bility? Of itself, muscle cannot move. The word muscle was generically applied to the muscular portions of the body because their contractile phenomena resemble the stealthy movements of a mouse—*musculus*—or from the Greek verb *μυω*, to move. Deprive a muscle or muscles of their contractile power by paralysis, the result, as we know, is muscular inertia, apathy, immobility, death, to all intents and purposes, whether transient or permanent. Something is wanting and has been lost, and without that something there is no muscular life, so far as functional energy and the impotence induced by innutrition and atrophy are concerned. What is that something? We have said that paralysis has intervened. What is paralysis, and how, why and where has it intervened? Its etymology tells us that it is a loosening—*παραλυσις*—and its effect, that it is a loosening of a connection; and it has come between the muscle and what? The muscle is dead, so to speak, and the intervention has killed it by taking away that which kept it alive, by coming between it and the great center whence is irradiated the subtle force that animates the body from life to death.

Now we come back to our uterus. Red blood is pouring from it, a young life has just come into the world, and the life that gave it is going out of it, and is upon the brink. Unless that red current is stayed, the brink will be passed, and eternity will begin. Now comes to our aid Nature's beneficent provision. But we're going too fast; we must stop to inquire why that blood flows? It flows because flood gates are open and must be closed. Why are they open? Because muscular contractile inertia is impotent to close them. The uterine muscular agencies are all there intact, but the vital spark that animates them has gone out, and must be lit again. Where is the vital spark? It lies smouldering in certain white cords and gray bodies, whose antennæ or feelers reach out and run here and there among uterine muscular fibers, an intricately interwoven web, whose threads palpitate with life. But there's a palsy upon them; an intervention is here. Now comes Nature's provision, the drug, and with it the unchanging law, the law of nerve and drug affinity. Like two globules of quicksilver they run together, and from their union threads and cords vibrate again with the old, familiar pulse, lost strength is restored, uterine muscular walls contract, danger is passed, the physician draws a long breath of relief, and thanks God for another life saved.

But now comes the "questio vexata." What makes that drug reanimate those nerves and ganglia so preponderantly abundant in the human uterus, which, in turn quicken the energies of the palsied muscular fiber, and make it start into life again? It's all very well for us to say that there's a subtle principle or element in one or the other of the earth's productions that will stop the flow of the red tide from the mouths of bleeding vessels, and save life. So will the caustics and astringents that come out of the alembic of the chemist. But here's a subtler force, and it acts through another intensely vital force, the inscrutable force of ner-

vous matter. Can we hope to solve the mystery of it, or does it confront us as did the sea the foolish Canute, and rebuke the vain effort? Nevertheless, suppose we venture a halting suggestion or so, hoping for some light to guide and encourage. The area of action of ergot is wide, and its influences extensive and diffuse. We have already adverted to some of its toxic effects, but our present purpose is more particularly directed to the consideration of its nerve affinities. In his comparative estimate of the action of ergot and belladonna upon the spinal cord as seen by vivisection, Brown-Sequard observed many effects that seemed to be analogous as respected their influences upon the cord by producing congestion and general vascular disturbance. But the chief effects of the ergot were more especially manifested upon its lower portion, while those of belladonna tended to the cervical and dorsal regions. This fact serves in great measure to explain the specific action of the ergot upon the parturient, as also the non-parturient uterus, by checking the blood supply of the latter. It is well known that the lower animals abort after eating ergotized grain.

The whole ganglionic nervous system is more or less subject to the influence of this drug, and the impressions made by it upon the vaso-motor centers generally are those that especially characterize its action. It is by the combination of these impressions upon the motor and sensory forces of the lower spinal medulla, and upon those dispensed by the large and abundant uterine ganglia and plexuses—among the largest in the body—that the ergot is so efficient in determining the vigorously expulsive contractions of the parturient uterus. The design of Nature in supplying the uterus with so large a proportion of nervous matter, and consequent nerve force, may well be an interesting subject of inquiry. Of course, it is manifest that the primary object was because of the necessity for its uses in the great function of reproduction. The uterus is the temporary home of the young life, where it is formed and fashioned, and perfected in its every minutest detail, and made ready to be projected into independent life. The intra-uterine processes, so multifarious, so intricate, and so wonderfully adapted to their ultimate purposes, constitute the study for a lifetime of the anatomist and the physiologist. The influences of the uterus upon female life, both in its parturient and non-parturient condition, are too well-known to need more than mention here. But might it not be pertinent to inquire if the liberal supply of the uterine ganglia is wholly designed to serve the requirements of reproduction and parturition? Through these ganglia and their polar antennae a free and uninterrupted association is maintained between the uterus, the cerebro-spinal axis, and the whole chain of the ganglia of the great sympathetic system, from its first ganglion—the ophthalmic—down to its terminal ganglion impar. We believe that the purposes of this or these associations are not confined to the legitimate function of reproduction.

The drug that we have been considering does not limit its action to the uterus, by any means, but, as we have already said, its area of action is

wide, and its influences diffuse and extensive. We have said, too, that its phenomena were due to its affinity with the great sympathetic especially. We venture to add that we believe that the ganglionic and other nerve influences of the uterus are not only felt physically by brain, heart, lungs, stomach, intestines, etc., but that the subtle moral, psychological and emotional manifestations that make up so much of utero-gestative life, the vivid impulses of maternity that spring from the young life within her womb, and absorb the whole being of the mother, all proceed primarily from the operations of those mysterious ganglia, and inspire the love and affection for her offspring that will survive all other afflictions. Look at the counter phenomena to be seen in certain diseases originating in the uterus, such as eclampsia, puerperal fever, and other morbid conditions due to metritis and other uterine disorders. Perversions of the maternal instinct, and of the affections generally, are the prevailing characteristics, all the result of interrupted normal ganglionic and other nerve force, and the substitution of the same forces under abnormal influences. No wonder that even in the early history of the knowledge of the physiological operations of the sympathetic ganglia, Winslow should describe them as "petits cerveaux," little brains. From the very first ganglion of the series—the ophthalmic—the dispensation of a special force is now recognized by advanced physiology, which serves the nutrition and healthful condition of the eye. Does it not also preserve its brilliant luster, its expressions, as various as its movements, whether they be those of love and affection, or those that give warning of the insidious beginnings of disease?

Among the toxic effects of ergot we note dimness of vision, with dilatation of the pupil, vague and wandering expression, etc. What is this but drug and nerve affinity between ergot, optic nerve, and the gray, ganglionic matter of the ophthalmic ganglion? The devotional tenderness of the ocular expressions of the maternal eye began when the young life was yet unborn, by radiation from uterine to ophthalmic ganglia. Even the glare of ferocity and native savagery in the eye of the wild and untamed animal is softened and subdued by the gambol and play of the young cubs. Loss of the senses of smell and hearing, preceded in the latter by excessive sensibility of the auditory sense, hyperacusis, is also among other toxic effects of the drug under consideration. This is another instance of nerve and drug affinity between ergot and the substantia gelatinosa of olfactory and auditory nervous matter. Depression of cardiac action, with slow and weak pulse, reduction of the frequency of respiration and gastric disturbances, are also among these toxic effects. All these abundantly show the nerve and drug affinities of ergot, and it will now be readily seen why we have selected this drug especially because of its very many and various effects upon the economy. There is probably no one drug that combines more or as many. Its specific affinity with the uterine muscular fiber, and the nervous forces controlling its contractive

action, was another cogent reason for its selection, particularly as there is in the uterus such a superabundance of nervous matter, motor, sensory and ganglionic or sympathetic.

Let us now pass on to the consideration of ergot in its relation to the law of similars, and see what is the cumulative experience tending to establish another element of nerve and drug affinity.

Abundant additional evidences of the morbid properties of ergotin might be cited, but neither time nor space will permit their further accumulation, nor is it necessary, for doubtless our reader's experience and the results of his investigations may easily supply every need in this respect. Now we reach the two cardinal and crucial questions that confront us and demand specific explanation and solution. Can we supply this need? They are: (1) How do ergotin and its associate principles produce their morbid results when administered toxically? and (2) How do their toxic manifestations stand in relation to the law of similars?

To deal with these two questions adequately would require, in the first place, a critical consideration of the forces of nerve and drug affinities, and their combined action upon the nervous and vascular organization of the body, and, in the second, an extension of journalistic privilege hardly within the limit of admissibility.

There are forces in operation here, whose solution we don't find in the books, or even attempted by the voluminous authority they contain. To say that a drug is capable of arousing and setting in active operation in the body a host of morbid phenomena, so various and so destructive in their powers in one direction, and so salutary, restorative and reconstructive in another, and not to be able to give any solution of these mysterious forces at all, is humiliating, to say the least. There is a solution somewhere and somehow. Science has done, and is doing so much to drag from obscurity and to illuminate heretofore hidden laws of God and His handiwork, Nature, that it becomes a reproach to reflect that His best work, man, should be lacking in the perception and interpretation of what conduces so materially and indispensably to his physical and mental welfare—here we are reminded of certain properties of our drug that can "minister to a mind diseased," too, in its far-reaching powers, and which we have failed thus far to note. The mental scope of ergot is among the most valuable of its contributions to the cure of disease. We say and feel that it is humiliating that we find no interpretation of these operations that are going on under our eyes every day and hour that we live, and all we do is to shake our *wise* heads—heaven save the mark—and say we don't know, we don't know, not intended we should know, may be we'll know by and bye! But, thanks to Mother Earth, she keeps us here by the munificent bounty of her fruitful bosom, for our allotted space in the shifting scenes of life. Soon the processes of our somatic dissolution and decay, which must go on under the inexorable fiat: "It is given unto all men once to die," will prove too strong for even her tutelar beneficence.

Then we go hence. Where?

CLINIQUE.

ACUTE OSTEO-MYELITIS OF TIBIA.—REPORTED TO THE LOUISVILLE CLINICAL SOCIETY.*

BY W. L. RODMAN, A. M., M.D.

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CASE I.—A lad æt. fourteen years, who received an accident to his left leg five months ago. He lived in Trimble County, and was under the care of Dr. J. C. Hancock, of Bedford, Ky. Several weeks after the traumatism he suffered considerable pain over the left tibia; there was some tenderness on pressure, fever, and all the symptoms of acute osteo-myelitis. He continued in about this condition for three or four weeks. In the meantime, tenderness and swelling appeared in the opposite knee. I was finally asked by Dr. Hancock to see the patient with him. I went to Trimble County, met the doctor in consultation, and would have operated there, but for the fact that the surroundings were such that any operative measures would have been undertaken under the greatest disadvantage. I suggested that the patient be brought to Louisville, and he came with me that day. He suffered so much pain that he could not have been taken to the train in an ordinary conveyance, but, fortunately, snow lay upon the ground to the depth of eight or ten inches, and we put him on a sled and were able to take him eight miles to the depot without his suffering any pain.

At the Kentucky School of Medicine Hospital the next day, after chloroforming the patient and using Esmarch's bandage, that we might better determine the extent of the diseased tibia, the operation was performed. I at once saw that there was very much greater destruction of the tibia than had been suspected; in truth, there was not a particle of bone between the knee and the ankle that was healthy. I have never seen so complete destruction of a bone in my life. Under the circumstances I at once came to the conclusion that anything short of amputation would almost certainly result in death of the patient. In addition to the osteo-myelitis there had been a suppurative periostitis, it was loosened up entirely from the bone, and, as I have said, the bone was entirely necrosed from the knee to the ankle. The ankle joint was also open and diseased. The thigh was amputated at the lower third. Notwithstanding the fact that the boy was in bad condition, pulse 148 when he went on the table and was in a condition of profound sepsis, he stood the operation very well. At twelve o'clock that night—the operation being done at three in the afternoon—he had reacted from the shock and has done uninterruptedly well so far as the operation was concerned.

* Stenographically reported for this journal by C. C. Mapes.

A few days after the amputation the trouble in the other knee, which was noticed before he came to the city, also attracted more attention from us. His fever went up again; tenderness over the knee was very great, and I was satisfied that there had been a suppurative synovitis in the joint. He was etherized again and a free incision made into the knee joint, and it was irrigated with an anti-septic solution. A drainage tube was inserted at the upper part of the knee joint, and one at the lower portion, in this way making through and through drainage. The case was not dressed for two days; since that time it has been dressed at intervals of two, three or four days at different times, and I am glad to say that it is now certain that the operation upon the knee was timely, and the patient will recover with a perfect joint. I believe that had we not acted as promptly as we did that he probably would have synostosis of the joint—perhaps in a faulty position. Scarcely a year passes that I do not see two or three cases of ankylosis in bad position as a result of suppurative synovitis, which was either not recognized or was improperly treated.

RESECTION OF KNEE.

Case II.—The next case that I wish to report was a resection of the knee. The patient, a child at seven years, had suffered with disease of the left knee joint since early infancy. She fell into the hands of Dr. Ap. Morgan Vance a year or two ago, and he at that time suggested resection. The patient not complying with the terms proposed (he wishing to have her taken to the Children's Hospital), Dr. Vance declined to operate. She was brought to my clinic at the Kentucky School of Medicine Hospital a week or ten days ago. I believed that the only thing to do was a resection. The limb was in a bad position at the time, being greatly flexed. I put the child in bed and attached a weight so as to straighten the limb to a certain extent before undertaking resection, because it is never a good plan to attempt resection with a limb so markedly flexed.

I operated upon the case March 21, 1895, making a semilunar incision extending from the external to the internal condyle of the femur. I removed the patella, finding no particular disease of it, but tuberculous disease of the supra-patellar bursa. After opening the joint, cutting the quadriceps extensor and the lateral and anterior crural ligament, the lower end of the femur was placed into the wound, and I saw at once that there was an abscess of the internal condyle of the femur, also one of the inner tuberosity of the tibia. The saw was applied in such manner as to miss the epiphysis, that being the most important feature of the operation in a child so young. Not more than one-third of the articular surface of the femur was removed. The abscess cavity of the inner condyle was freely irrigated after the section was made with the saw. Had I taken enough off the lower end of the femur to have gotten beyond the abscess cavity I certainly would have removed the epiphysis, and of course stopped the growth of the limb. Then the tibia was sown so

as to miss its epiphysis also. I think the case was undoubtedly tuberculous in nature, and I may say also that there was a distinct history of tuberculosis in the family. I removed the patella, not that it was diseased, but because there is no use for it after excision, as you do away with the action of the quadriceps extensor, and it has been found that you often either leave some disease of the patella or it thereafter develops. I think it should always be removed in doing a resection. The child has done interrupted well, save a little pain she has had on one or two occasions. A microscopic examination of the tissue removed has not yet been made, but a section has been sent to Dr. Carl Weidner for this purpose. I am satisfied, however, that it is tuberculous in character.

(Later.—The report was made, showing it to be tubercular.)

RADICAL CURE OF HERNIA.

Case III.—The next case I report was a radical cure of hernia by the Bassini method. The case is not particularly interesting except in one respect, which I will refer to a little later. The patient, a boy aged ten years, had a right inguinal hernia which was partly irreducible. He was the subject of hernia of the opposite side two years ago, and two years ago last month I did a radical cure upon the left side after the method of Kocher. The hernia has never returned, although he has not worn a truss at any time. The second operation (upon the right side), was done after the method of Bassini. The only interesting feature of the case is that there was the most positive infection of the wound by means of the catgut, and I report it for that reason more than any other. The sac was ligated high up with heavy catgut; the skin brought together by interrupted sutures, also of catgut. Not only was there a stitch abscess at the suture point, but after the superficial part of the wound had ceased to suppurate, it was very plainly seen that there was infection below, which must have been caused by the catgut used. I used in this case the catgut which I had believed to be the most trustworthy on the market. The result in this case is not different from some others that I have had, and I am led to state that it is my belief that catgut cannot, under any circumstances, be made absolutely sterile by any process we know of, or by all of them combined. I am satisfied that Schimmibush, Robb and others, who have recently written upon the subject, are correct in stating that it is never completely sterile. The result in this case, barring the suppuration, which I do not think will militate seriously against the radical cure, was everything we could have wished. I am very frank to say that in two or three other cases of radical operating I have had suppuration, and have never failed to get a radical cure; in fact, I have never had a return of the hernia in any case where I have practiced the radical cure.

REMARKS.

Dr. Louis Frank: I am glad to hear Dr. Rodman concur in the statement I made before a

meeting of this Society some time ago; I refer to the perfect sterilization of catgut ligatures. At a previous meeting of this Society, Dr. Roberts reported a case of hernia in which he used catgut ligatures, followed by suppuration, and asked the question as to whether other members had experienced the same trouble. I stated at that time that I believed it absolutely impossible for any man to render catgut sterile. Dr. Roberts, Dr. Vance, and I believe Dr. Rodman, stated that they believed it could be made aseptic. I have used catgut several times, and have invariably gotten suppuration as a result. Whether it was due to the catgut, or whether due to some faulty technique I do not know, but it struck me as being rather singular that suppuration only occurred when catgut was used. I have seen the same ligature used in abdominal work by Dr. Wathen, and he had no suppurative trouble following. I think it is rather queer that we should find such results in one class of cases, and just the opposite in another class. It merely confirms me, however, in the opinion that it is absolutely impossible at all times to get catgut which is aseptic.

Dr. W. L. Rodman: As to the point made by Dr. Frank concerning catgut ligatures: I was present at the meeting he refers to, and think I remember to have stated that the best catgut we have was the Van Horn & Ellison, but did not say that I thought catgut could be completely sterilized. I simply stated that I thought the method of Van Horn & Ellison was an improvement over any other I had heard of, also that it was very highly recommended by Bull, Abbe, Coley and others, that I had brought a quantity of this gut with me to Louisville, and since that time had more of it sent here, believing it to be the best preparation on the market. I have used very little catgut recently, and believe with Dr. Frank that it is impossible to perfectly sterilize it by any means or by any process that we now know of. When you stop and reflect a moment it would seem from the nature of the tissue itself that it is impossible to get complete sterilization; we cannot boil it except in alcohol, which boils at a temperature of 175° ; and we know that even where we boil tissues in water at a much higher temperature— 212° —it is not certain that you destroy all the germs, that is unless you boil and reboil. The bacillus anthrax, for instance, which might be in the gut, would not be destroyed by boiling in alcohol; it might not even be destroyed by boiling in water, unless you boil and reboil for a considerable length of time. It is very difficult to destroy these bacilli and spores. I think Dr. Frank is correct, and we have the statements of Schimmibush and others who have written on the subject to the same effect. I think the majority of surgeons who have used catgut have had more or less suppuration. I do not mean to say that suppuration necessarily follows its use, and I have seen good results myself in a great many cases where this ligature was employed, but believe from the nature of the substance that it is impossible of sterilization by any known process. It is very easy to sterilize the external portion of the gut by boiling in alcohol or immersing in carbolic acid

or bichloride of mercury solution, but we find in forty-eight to seventy-two hours after the external surface of the gut has been absorbed we get suppuration from infection by the central portion of the ligature. This portion will not have been reached by carbolic acid, bichloride or any other agent you may have used in sterilization.

In my later operations I have used silk almost exclusively. I find little trouble in burying silk, and now that I depend upon it do not have suppuration.

CLINIC ON HEMORRHOIDS.—HELD AT THE METROPOLITAN HOSPITAL, BLACKWELL'S ISLAND.

BY W. G. FRALICK, M. D.,
Attending Surgeon.

AT best the opportunities for observing surgical technique and following the various operative steps at close range are limited.

At all times a great variety of remedial agents and surgical methods have been brought forward. I shall only refer to those methods which are the most highly approved at the present day. Ligation is simple and effective when the pile tumors are small and pedunculated; when the tumors contain organized clots, few in number, and there are no adhesions, incise and expel their contents.

Injection of carbolic acid is a favorite method with some. It is not without danger, as a thrombus is apt to be disintegrated and small particles may pass into the circulation; abscesses are also likely to form. Pastes are sometimes employed to destroy the tumors, but with indifferent results. The clamp and cautery doubtless have more advocates to-day than any other method. In selected cases the results are very satisfactory, though I have seen most troublesome hemorrhage and a great deal of sloughing follow their use. The conditions most suitable for this method are large isolated tumors, or an aggregation of smaller ones not involving the entire orifice.

The Whitehead method, when performed by a skillful operator, accomplishes much, but it is too complicated to gain general favor, especially when we can show better results by another method, which is called for in similar conditions. This latter operation, "The American or Pratt's," I have performed many times, with entire satisfaction. I shall now endeavor to demonstrate it.

The patient has been prepared in the usual manner. The bowels have been freely evacuated and the external parts have been made aseptic. The patient is anaesthetized, then placed in the lithotomy position and the rectum washed out. This first step is to dilate the sphincter muscles, using Pratt's bivalve speculum. This accomplished, we examine the bowel which is exposed. You will observe the hemorrhoidal tumors surround the entire orifice, and involve the inferior and middle hemorrhoidal vessels. Above for some distance there is a slight varicose condition which will disappear in a few days.

The next step is to grasp with a pair of Pratt's T forceps, the mucous membrane just above the tumor at some point, preferably below, making gentle traction; this exposes the mucous membrane sufficiently to enable me to apply the second pair of forceps, which are placed about one-half to three-quarters of an inch from the first.

With the second pair of forceps I make traction in a like manner, and the third pair is applied, and so on at intervals until I have a sufficient number in position, usually six or seven pair. These are held by assistants in such a manner as to form a circle. Slight traction is then made. My next step is to divide the mucous membrane just above the line of attachment of the forceps. This I do with a knee-bent pair of scissors. I now shall dissect the entire mass down to the junction of the skin and mucous membrane, then remove it, using in making the dissection a flat, curved, blunt pair of scissors.

There will probably be hemorrhage from three or four small vessels, which is controlled by torsion. The external sphincter is now nicely in view. I shall next draw down the retracted gut and dissect up, freeing it for a distance equal in length to that which I removed from below; keeping close to the mucous membrane during the dissection. Thus the sphincters are unimpaired, and their anatomical position will be unchanged; there will be no tension, no rolling of tissues, and no pressure; which would be the case did I not make the dissection upward. This I consider the most important feature of the entire operation. The parts are now washed with sterilized water, the forceps removed, and, as there is no hemorrhage, I will proceed to draw down the gut, which has again retracted, and suture it to the skin, being careful that there is no twist in it. Three pairs of T forceps, or more if necessary, are used to hold it in position while suturing. Four interrupted sutures are now introduced, two lateral, one anterior, and one posterior; also a continuous suture. The interrupted sutures serve a two-fold purpose. They hold the gut in its proper position while applying the continuous suture; they prevent undue puckering, for should the continuous suture be absorbed at some point before union has taken place, they prevent excessive retraction and separation of the mucous membrane from the skin. I shall put a little gauze packing in the rectum, which will be removed in about twelve hours. A gauze compress, combined dressing, absorbent cotton, and a T bandage, is all the dressing that is required.

The patient will be given hypericum internally, and will also be catheterized every six or eight hours, as there is frequently retention of urine for a few days.

The bowels usually move about the third day; if not a purgative will be administered. In most cases nothing more is necessary. Before concluding let me say that hemorrhoids are perhaps more frequently met in general practice than any other disease. Do not prescribe for subjective symptoms alone. An examination should be made always when possible.

Familiarize yourselves with the pathological conditions; study the sympathetic nerves, for waste and repair are largely under their influence; consider the reflexes; distinguish between causes and effects.

Orificial surgery is receiving greater consideration to-day than at any other period. This is due almost wholly to the ability and energy of Dr. Pratt, whose progressive views have received the attention of the most eminent surgeons of the two continents.

POISON SUMACH AND POISON IVY.

There is a difference in the general appearance of the plants, both as to stalks and foliage, by which the poisonous and the harmless varieties of the sumach can be distinguished from each other, writes Eben E. Rexford, in a very valuable article on "Our Poisonous Plants," in the *June Ladies' Home Journal*. The former has light-colored stalks, frequently blottedched with white or gray, and the foliage is thin and firm in texture, with a glossy surface, while the latter has a soft, thick leaf, a brown stalk, hairy in the early stages of a new growth, and is of a much stronger habit, often becoming quite a tree. This variety bears fruit thickly covered with crimson hairs in spiky, terminal bunches, while the poisonous variety has berries of a greenish white—very similar in size and color to those of the poison ivy—in loose, pendant clusters, along the upper part of the branches. The harmless rhus is almost always found on the uplands and in open places, while the poisonous sort prefers moist ground and shade. The former takes on a most beautiful variegation in fall, its pinnate, palmate foliage turning to red, scarlet and maroon of exceedingly rich and brilliant shades, while the latter becomes a pale yellow. This poisonous variety is a most dangerous plant. It is worse than the poison ivy by far. Many persons cannot pass near it without being affected as if they had really handled it, strange as it may seem. It seems to be able to communicate its virulent qualities to the atmosphere which surrounds it.

BUT HE CAN'T ADVERTISE.

A physician sits in his office chair,
And there broods on his face a look of care,
While he groans and wails and tears at his hair.

"Alas! and alas! and alack!" he cries;
"Surely fame and fortune would both arise
If old Ethics would let me advertise."

At last a bright thought breaks into his brain;
Says he: "I must try that old racket, 'tis plain;
It worked O.K. once, and I'll work it again."

He wrote half a page on "The Evils of Pork,"
And the case of a man who swallowed a cork
And a spoon and a knife, but got stuck on a fork;

Told how he cured an imprudent fellow
Who swallowed entire a gingham umbrella,
And brought it intact from the patient's patella.

The newspapers all extended their thanks;
He opened accounts at the various banks;
He'd baited with Ethics and caught all the cranks.
—*Chemist and Druggist.*

Petroleum may be solidified into a mass like suet by adding from 1 to 2 per cent. of common soap, and heating in a water-bath until the soap is dissolved.

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MALE AND FEMALE

NOTWITHSTANDING the most minute researches of modern science, the problem of the cause of sex seems to be not much, if any, nearer solution than ever. We as yet know but little more than the simple fact that this cleavage exists between almost every two of every plant and every animal in existence, on the one side growing up the male and on the other the female; but we are met by exceptions in every one of the hundreds of theories advanced, showing that however near we have reached the mark, there is yet a mystery unsolved. Several years ago a prominent Swiss scientist, who was also a large farmer and grower of choice stock, both cattle and horses, noticed that those of his cows which were taken to the bull early in the heat, say within the first four or five days, always brought forth heifers, while those which were sent to the bull the last of the heat gave birth to bulls. Extending his observation to horses, he found the same rule prevailed among mares as among cows. Wishing to submit to a careful test what had heretofore been a matter of general observation, this gentleman selected from his herd twenty-one cows, twenty of which were admitted to the bull within the first three days of the heat, and the remaining one at the last end of the heat. The result was twenty heifers and one bull. All the cows were fed alike and received precisely the same care. The same test was applied to mares, with like results. The question now arose: What is the cause of this cleavage in the embryonic development, on the one side evolving the male and on the other the female; and if this rule holds good among ani-

mals, why may not the same rule prevail among human beings? As regards the cause, only a theory could be formed, and that was, that as the ovule, before it became detached and passed out of the womb, was for several days capable of impregnation, if this occurred within the first few days—say, four or five—the result would be a female; but the ovule impregnated when fully ripe—say, three or four days before it was time to become detached—would give a male. In the woman the period from the cessation of the menses to the evacuation of the ovule is about ten days, and if this rule was infallible, impregnation, say from the seventh to the tenth day after the menses, would result in a male. But notwithstanding stock yards generally observe this rule, experience has shown there are many exceptions, as there certainly are among human beings—too many to admit of positive certainty.

The recent study of biology has brought out certain facts, somewhat in the line of those we have already discussed, which may contribute still further to a solution of the problem. From a careful study of the function of nutrition in connection with reproduction, the biologist has brought to light cases where the quantity and quality of food has apparently determined sex. Young, in his "Evolution of Sex," brings out some very interesting facts. In his observation on tadpoles he found in the natural condition the percentage of males and females was about equal, being about fifty-seven females to forty-three males, the females being seven in excess, but when the tadpoles were sumptuously fed the percentage of females arose to seventy-eight. In a second test, when the nutrition was still better, the percentage of females arose to eighty-one, and in a third test, when they were fed on a still more nutritious diet, ninety-two females were produced, and only eight males. It has been found if caterpillars are starved before entering the chrysalis state, the offspring are males, while others of the same brood when highly nourished develop females. It is found that during the warmth of summer, when food is abundant, the plant lice of our gardens produce nothing but females, while in the famine of later autumn males are at once produced. The relation between nutrition and sex is still better studied in the bee. The three kinds of inmates of a beehive are known as queens, workers, and drones, or as fertile females, impotent females, and males. It is believed that the eggs which give rise to drones are not fertilized, while those which develop into queens and workers have the normal history. But what fate rules the destiny of the two latter,

determining whether a given ovum will turn out the mother of a new generation or remain at the lower level of a non-working female? It seems certain that the fate mainly lies in the quantity and quality of food. Royal diet and plenty of it develops the future queens. Up to a certain point the nurse bees can determine the future destiny of their charge by changing the diet, and this in some cases is done. If a larva on the way to become a worker receive by chance some crumbs from the royal superfluity, the reproductive functions may develop, and what are called fertile workers, to a certain degree above the average abortiveness result; or, by direct intention, a worker grub may be reared into a queen bee.

Geddes says the female cochineal insect, laden with reserve products in the germ of the well-known pigment, spends much of its life like a mere quiescent gall on the cactus plant. The male, however, in his adult state, is agile, restless and short-lived. Now, this is no mere curiosity of the entomologist, but in reality a vivid emblem of what is an average truth throughout the world of animals—the preponderating passivity of the females, the freedomness and activity of males. The distinctive point proved by these facts seems to confirm the observation of Rolph, that, in the determination of sex, the less nutritive, and therefore smaller, hungrier and more mobile organism, is the male; the more nutritive and usually more quiescent, is the female. If these facts in reality give a clue to the origin of sex, the question is to so utilize them as to be of practical benefit to the world.

THEORY AND FACT.

NO better test of the workings of the present Excise law, adopted no doubt for political purposes, and never intended to be fully enforced, can be obtained than in the increased or diminished list of persons admitted to police cells and to the alcoholic ward of Bellevue Hospital under the present rigid enforcement of the law. The records of these places of detention tell the story with a great deal of emphasis, the facts, which cannot be controverted, if we are to believe the records, being worth, in coming to a conclusion, more than any amount of theory, however logically presented. In a single day at Bellevue, of the twenty-five cases admitted, eighteen went into the alcoholic ward. The physicians in this ward say that the increase in alcoholic patients has been markedly noticeable since the strict enforcement of the Excise law. Since

it is impossible to obtain beer on Sunday, many people, some of whom would be satisfied with two or three glasses, lay in a stock of liquor on Saturday night, often of the vilest character, to be brought out Sunday in their own rooms and drank with their neighbors in the presence of their families, in an immoderate quantity. Nearly all the five cent distillery stores do an enormous business Saturday nights, and it does not take much of the vile stuff which thus finds its way into the home of the working man, to sow the seeds of the large harvest of delirium tremens, gathered Sunday and felt all the early part of the week. How to reduce the evils of Sunday drinking to a minimum is a question not of theory but of fact, in which we are obliged to take into consideration human nature as it is, and lead up in the surest way to what it ought to be and may become when properly directed. There is no question but that the surest way to make a bad law so obnoxious that the call for its repeal will be imperative, is, while it is a law, to rigidly enforce it against all violators, and there can be no question either among thinking men, that a measure which affects so deeply the minds and the lives of the working people should never become a political measure to be decided on party lines, as more or less votes for State or national questions can be won. The question should stand entirely outside of political party platforms, and form a platform by itself, constructed by minds accustomed to deal with mind, to analyze its workings, to guide and direct its forces, and to point out its needs. This is not the work of the mere politician, but of the mental philosopher, the alienist, the scientist, the physician, men of ripe culture, of profound thought and close observers of facts. When this work is entrusted to men of this class, the commencement at least of a work of reform will be inaugurated, which will be far reaching and lasting in its results for good, and a long step toward solving the problem for all time.

THE NEW SCHOOL IN MEXICO.

MR. FREDERICK R. GUERNSEY, the brilliant editor of the *Mexican Financier* and the *Mexican Daily Herald*, gives, in a recent editorial, facts and reflections which will be of marked interest to our readers. Speaking of the liberality of the Mexican Government in fostering science and encouraging the spirit of development and progress everywhere Mr. Guernsey says: "President Diaz was instrumental in having built the Homœopathic Hospital in the City of Mexico,

which has been for over two years in successful operation, and now lends the weight of his influence to the establishment of a national Homœopathic school of medicine and surgery here at the center of the republic. The curriculum ordained in the document appended to the presidential decree is certainly an ample and a thorough one, and it is distinctly stated that the diploma of the school shall be equal to that of any other school in the republic. We are partisans of neither school of medicine, but we welcome any step that leads us away from the old-fashioned administrators of boluses and huge doses! Their day is fast departing in an intelligent and modern world. Health is not to be got out of a bottle, although medicine may aid Nature, but Nature does the work, not the doctor, who, if skillful, successfully aids her endeavors to restore the healthy equilibrium of the human system."

Mexico, under the progressive administration of President Diaz, is rapidly developing a stronger and more vigorous life. The City of Mexico is located in a valley forty-five miles long, between 7,000 and 8,000 feet above the level of the sea, surrounded by a mountain wall through which there is no natural outlet to the sea. As a natural consequence, epidemics, especially of typhus fever, are frequent, and attended with great fatality. One of the greatest feats of modern engineering skill has recently been accomplished by boring a tunnel through this mountain range, which will effectually drain the entire valley, making it one of the most healthy spots in the world, a second Vale of Cashmere. The great seaport centers of Tampico and Vera Cruz, which during the spring, summer and fall months have been the hot-beds of yellow fever, will be rendered as healthy as any seaport on the Gulf or Atlantic coast, by a system of underground sewers, now being prepared, through which, flushed by an abundance of pure water brought from the mountains, the sewage matter will be carried out to sea beyond the harbor improvement works, thus avoiding what is the curse of Havana—a locked-in bay, filled with city sewage.

AFTERNOON HIGH TEAS.

THE food exhibitions held yearly at the Madison Square Garden have always been attractive and largely patronized by our most refined and cultured people. This year a new feature will make the fair still more interesting and attractive. This feature is, in addition to the usual attractions, a High Tea every afternoon from 1 o'clock until 10 P. M., one half of the proceeds to be given

to some specified charity on a given day. The 26th of October is assigned to the Hahnemann Hospital. Admission will be by invitation. The cards presented at the box office with \$1, entitle the holder to admission to the fair and to the High Tea, which, in abundance and variety, will be supplied with a succession of epicurean dishes by celebrated chefs.

The laying of the tea tables will be supervised by stewards and head-waiters from the prominent hotels and clubs, showing the most approved forms of service in china, glass and silver. Decorations by the leading florists will show the coming season's style in the massing and banking of flowers, including the beautiful California violet, the new black Dutch rose, and the latest varieties of Japanese chrysanthemums; Samovars will be used for Russian tea, Chinese cosies for orange Pekoe, bamboo baskets for Japanese tea, and Kumidzu for Buddhist Temple tea. Oriental confections and conserves, Persian sherbet, Mexican chocolate, frozen nectar, California crystallized fruit frappe, Cuban Pana de Rosas and other novelties will be served. Tables will be reserved for chafing-dish parties and clubmen who wish to invite their friends to partake of special dishes prepared for them.

THE APPENDIX VERMIFORMIS.—The function of this troublesome little organ is said by the authorities to be unknown. It is also described as rudimentary, and undergoing gradual obliteration from want of use ever since we were monkeys. Some have even recommended its removal in infancy as a prophylactic measure, like vaccination. *Per contra*, Dr. C. F. Howe, in the *Medical World*, endeavors to show that if "Nature makes no mistakes," then this appendix *has* a function, and, he believes, a very important one. "It will be remembered," he says, "that the appendix, though very small (worm-like), is very elastic and susceptible of considerable distension. In my opinion the appendix vermiciformis bears the same relation to the cæcum as does the appendix auricularis to the right and left auricles of the heart. They are both there for a purpose, and that purpose is certainly nothing less than excess-reservoirs. The excess-reservoir function of the appendix auricularis can be easily appreciated when it is considered that rupture of the heart (heart failure) nearly always means rupture of the ventricles, although the ventricular walls are much thicker than those of the auricles. In the same way the appendix vermiciformis serves its purpose; that is, when the cæcum becomes full and the movement

tardy the appendix is next filled. This puts the thin walls of the appendix upon the stretch, which must cause irritation, subsequent contraction and expulsion of the whole mass. The appendix vermiciformis is Nature's great safety valve or governor, preventing rupture and death. At any rate, I am satisfied that it has a double function, that of a safety valve and a reservoir, to be filled and emptied every day. I believe a sluggish, torpid colon is more responsible for appendicitis than an accumulation of matter in the appendix. In dissecting we once found thirteen pins in an insane woman's appendix, all pointing downward, and some of them were considerably worn, which goes to show that they had been there a long time, and had caused no apparent trouble, but had become worn by muscular friction in receiving and expelling its daily mass."

IN some respects Mexico is showing to-day more enterprise, more wisdom and more regard for the public health than the City of New York, which sends its refuse matter out to sea at an enormous expense, to be dumped into the ocean and thrown up by the returning tide upon Long Island beach. All this refuse matter, which can never be utilized on account of expense, could be cremated without offensive odor with very little if any expense.

A syndicate has offered to cremate all the refuse gathered from houses and streets at less than one-quarter the expense now incurred in dumping it into the ocean, where it can be washed up on the Long Island beach, to the great annoyance of the thousands who frequent the summer hotels, and to whom an ocean bath is of so much importance. The process proposed is a very simple one, devised by Mr. Chesbrough, and fully proved in burning out the animal matter from bone black used in the manufacture of vaseline. The plant consists of a chimney sixty feet high, and perhaps twelve feet in diameter, with twelve or fifteen sets of steel bars placed across the shaft, the bars being two or three feet apart and each set of bars five or six feet above the one immediately below. The shaft is then brought to an intense heat through the combustion of petroleum, steam and air, introduced from the bottom. The refuse gathered from the city is hoisted to the top of the shaft and by a plunger at the rate of two strokes a minute forced into the shaft. In falling it is broken up against the successive bars, so that each particle of matter is brought in contact with the intense heat, and all the animal and vegetable matter thoroughly cremated, without noxious gas or odor, and the refuse carted away to fill up sunken lots.

It is not necessary to erect the plant in the city, but for years the refuse could be utilized in filling up the sunken Jersey meadows, increasing immensely the value of property, and reducing the chance of malaria from that source to a minimum. The feasibility of this plan has been so thoroughly demonstrated that there can be no doubt of its success when our political bosses will give up theorizing and come down to practical facts.

LAST year a law was passed in this State requiring that all corporations established for the purpose of giving medical and surgical aid have their certificates of incorporation approved by the State Board of Charities. Dr. Stephen Smith, chairman of the committee appointed to investigate the condition of hospitals in this State, reports that he found some of the best constructed and conducted hospitals in the smaller towns and some of the worst in the large cities, and suggests that a bureau of information be created in the office of the State Board of Charities on the construction and management of hospitals. A bureau of this character, where all the necessary information respecting the construction of hospitals could be obtained, and the plans of those most approved and most successful in their working could be seen, would be of inestimable benefit.

SO large an amount of the business of the Regents of the State University comes from this city that they have very properly established an office at 10 East Forty-second street, under the direction of Mr. Asa O. Gallup, where all the blanks and information connected with the Regents in every department of study can be obtained.

CLINICAL INSTRUCTION.—A course of clinical instruction will be given during the coming winter in the three large hospitals connected with the Department of Charity and Correction, the New York City Hospital, and the Metropolitan Hospital, Blackwell's Island, and Bellevue Hospital, foot of East Twenty-sixth street. These lectures are intended more especially for physicians and third course students, and are free to all. At the Metropolitan Hospital Saturday afternoon is designated as Clinical Saturday. The large number of interesting cases always in the hospital give an immense variety to the operations and clinical studies to be seen on that day. In reference to the Metropolitan Hospital, all desired information can be obtained from Dr. A. K. Hills, Secretary of the Medical Board, 669 Fifth avenue.

THOSE who have had much to do with the care of the insane have been struck with a clairvoyance so marked in some cases that the patient seems to be able not only to read your own thoughts, but to tell with surprising accuracy what is going on in other parts of the building, or even in their distant home. This fact has been so often noticed by the expert that the clue furnished is considered of too much importance to be dismissed without inquiry as the disjointed and random utterances of an unbalanced mind.

HEROIC TREATMENT.—*The Homœopathic Recorder* contains a translation from a German journal of the cure of a cataract by a single dose of sulphur (500). The improvement commenced in three weeks after taking the remedy, and continued for six months, when the cure was complete. After the first month a dose of *sac lact* was given, for its moral effect once a week, and this sort of treatment old-school philosophers give as a fair illustration of Homœopathy. This case forcibly reminds us of a proving of *Rumex*, in which it was gravely stated that forty days after taking a single dose of the one-hundredth potency, there was an emission of warm flatus.

TIIGHT LACING AND GALL-STONES.—Professor Marchand, of Marburg, has again called attention to the fact that gall-stone and tight lacing are frequent coincidents. The furrow caused by lacing runs directly across the right lobe of the liver, causing a tendency to atrophy of the gall-bladder. When tight lacing has been extreme, an artificial fissure is formed in the liver, giving rise to what is termed the "lacing lobe," which carries with it the gall bladder. Stagnation of the bile is well-known to be one of the most important causes of the formation of gall-stones. A change in the composition of the bile, from catarrh resulting from congestion of the mucous membrane and the thickening of the bile due to failure of the gall bladder to completely evacuate itself, gives rise to the formation of small masses, which serve as nuclei for calculi. Hence, anything which obstructs the free outflow of bile through the cystic duct must favor the formation of gall-stones. Marchand is also of opinion that many cases of cancer of the liver should be attributed to tight lacing. It is only a few years since a German surgeon was obliged to open an abdomen to remove a "lacing lobe" of the liver, which had been so completely separated from the rest of the organ as to cause its death, rendering its removal necessary.

THE ELLIPSOIDAL STETHOSCOPE.—A disadvantage attending the use of every form of stethoscope hitherto constructed, is the production within its cavity of "amphoric resonance," by which the cardiac and respiratory murmurs, when feeble—as in cases of syncope or apparent death—are sometimes completely disguised. To obviate this, M. Ch. V. Zengler has devised (*La Nature*), a stethoscope made of solid wood (uniform in grain, like that of the linden tree), and hence conveying no air currents. It is in the shape of a very eccentric ellipsoid, the major and minor axes being to each other as say five to one. The ends of the ellipsoid are cut off perpendicularly to its axis, at points corresponding to the two foci, and are spread out into flat surfaces; any vibrations produced in one of these planes by contact, will be regularly transmitted to the other, which is applied to the ear. In this way the beats of the heart and the normal chest sounds may be very clearly and unmistakably auscultated. The ticking of a watch placed against the instrument, will be heard as if through a microphone.

PIANO PLAYING AND NEUROSES.—A corresponding member of the Paris Academy of Medicine has sent to that body a memoir in which he maintains that the numerous cases of chlorosis, neuroses, and neurasthenia observed among young girls is due to learning to play on the piano and the hours devoted to practicing. He has drawn up statistics from which he concludes that, among 6,000 pupils obliged before attaining the age of twelve to learn to play the piano, nearly 12 per cent. suffer from nervous troubles.

CHINA and Japan are suffering severely from cholera, with an unusual fatality for these countries. In Pekin there are fifteen hundred deaths a day. People drop dead in the streets, and the air is filled with the sound of gongs beaten to frighten off the cholera microbe. Even Japan, at the last advices, had lost 26,435 of its people out of 38,681 persons attacked. Thanks to sanitary regulations, there is but light chance of the scourge finding an entrance into this country.

DELICATE TEST FOR ARSENIC.—A Carnot describes (*Compt. Rend.*) a delicate test for arsenic, which consists in precipitating the substance as sulphide, then converting the precipitate by means of ammonia, silver nitrate, and hydrogen peroxide, into arsenic acid, and

finally determining that as bismuth arseniate, which is very insoluble in dilute nitric acid, and of which the weight is about five times that of the arsenic it contains. The formula of the precipitate is $\text{As}^3\text{O}^3 \text{Bi}^3\text{O}^3 + \text{H}^3\text{O}$, and the compound contains 21.067 per cent. of arsenic, equal to 32.303 of arsenic acid. The precipitate should be simply dried, and not calcined before weighing. As the result of a series of experiments it was found that the method is both certain and exact.

TO the thousands of our people, who yearly visit Europe in search of pleasure and health, the articles of Dr. Middleton, now in course of publication in the *TIIMES*, on "Health Resorts of Europe," will prove invaluable. The information conveyed is not that of mere tourists or making of guide books, but of a thoroughly scientific physician, who has visited every locality he describes, and carefully studied it from the standpoint of health and pleasure. The tonic of an ocean voyage and the entire change of living in a foreign country are naturally attractive to the health seekers with sufficient means and leisure to gratify their wishes; the physician will have in the articles of Dr. Middleton a sure index of the locations most desirable and to be avoided in certain diseases.

BIBLIOGRAPHICAL.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM. Delivered at the National Hospital for the Paralyzed and Epileptic, London. By W. R. Gowers, M. D., F. R. S. Philadelphia: P. Blakiston, Son & Co., 1895.

Anything from the pen of Dr. Gowers upon the specialty in which in suggestions, thought and practical observation, he stands confessedly at the head, will be received with marked interest by the profession. The opening lecture, in which is discussed "The Principles of Diagnosis of Diseases of the Nervous System," seems such an embodiment of the philosophy of Hahnemann in the study of disease, as to show that they have both followed the same line of thought and reached similar conclusions. Hahnemann strongly urged in the study and treatment of disease to be guided less by name than by symptoms individually and collectively and their bearing upon the trouble. Gowers says, "whenever you find yourself in the presence of a case that is not at once and completely familiar to you in all its details, forget for a time all your types and all your names. Deal with the case as one that has never been seen before, and work it out as a new problem, *sui generis*, to be worked out as such. Observe each symptom carefully and consider its significance, then put the several symptoms together and consider the meaning of their combination, whether there is any one part of the nervous system at which disease would cause them. Lastly, consider the way they came or as indicating the nature of the lesion, comparing this with the evidence of their seat, remembering also that their character may in itself tell you something of their probable nature. There is no department of medicine that consists more largely of applied physiology and anatomy than these diseases. But for the successful use of this method it is essential that the knowledge,

though neither extensive nor profound, should be firmly grasped and boldly used. Herein lies the chief practical difficulty. Timidity is almost a greater hindrance to diagnosis than is ignorance. You must feel some of the meaning of symptoms, you must weigh the evidence with care, and then you may and must feel that your conclusion is trustworthy. This confidence and boldness can only be acquired by familiarity with the process, by observing its use by others and afterwards repeating it for yourselves, thus becoming so familiar with the language of disease that you can read it with ease, can see at once the meaning of its words, and perceive with readiness the significance of its sentences. It is by affording an opportunity for this that the attendance or the practice, especially the out patient practice of hospitals, is of peculiar value to the student, whether pro or post-graduate. A series of cases of the same class pass before him, in each of which he can observe the character of the symptoms and the process of diagnosis, and thus he gains in a short time a familiarity with the features of disease, and a quickness in perceiving their meaning that he could not obtain in a long period of work. So infinitely various are the morbid states of the nervous system, so diverse their manifestations, that a very large number of the cases seen are practically new, even to men of large experience, and if asked he has to confess that he has not seen before any case precisely similar to, and often not one even approximately resembling that before him. Remember that for the time you must discard entirely your types and names. When you have made your diagnosis in the manner I have described, then, and then only, may you consider how far the case corresponds with a type and be called by a familiar name, but first the symptoms must be traced to the seat of their cause, so that the nature of the morbid process may be traced by their character and course."

Proceeding along this line of thought, a line not by any means new to the student of the new school, the author discusses in a masterly manner, full of original thought, mistaken diagnosis, argyria and syphilis, syphilitic hemiplegia, bulbar paralyses, facial paralyses, facial contraction after palsy, acute ascending myelitis, locomotor ataxia, the foot clonus and its meaning, syringo-myelia, the treatment of muscular contraction, the infantile cause of epilepsy, neuralgia, lead palsy, saturnus tabes and optic nervatus. A great charm in the book, aside from its suggestions and scientific character, is the grace of diction and the clearness with which the ideas are presented.

THE sixteenth and last volume of the first series of the Index Catalogue of the Library of the Surgeon-General's Office, U. S. A., has just been issued from the Government Printing Office at Washington. A second series, of five volumes, will be put to press at an early date. To the editor and the author the work is invaluable, as it is both an author and a subject catalogue, giving not only the subject, but a hint to the contents of every subject connected with medicine, both in books and pamphlets, in the whole world of medical literature, with the name of the author and the date of publication and the name of the publisher. Foreign titles have been generally translated into English. This unlocking the riches of one of the greatest scientific libraries in the world and bringing it within the reach of the student, we owe primarily to Deputy Surgeon-General John S. Billings, to whom our profession owe a lasting debt of gratitude.

Is There a Gonorrhœal Rheumatism?—J. A. Glaser asserts (*Jahrbücher der Hamburg Staats-Krankenanstalten*), in an examination of 380 cases of polyarticular rheumatism associated with stricture or gleet, that there is no essential difference in fever, pain or the number of joints affected, over what we might expect in uncomplicated cases. He comes to the conclusion that a gonorrhœal rheumatism, dependent for its cause on gonorrhœa alone, does not exist. He mentions that the presence of gonococci in the affected joints signifies nothing, as it thrives only on mucous membranes.

SOCIETY REPORTS.

CASE FOR DIAGNOSIS.—REPORTED TO THE LOUISVILLE SURGICAL SOCIETY.*

LICHEN RUBER PLANUS.

By I. N. BLOOM, A.B., M.D., LOUISVILLE, KY.,
Dermatologist to the Louisville City Hospital, etc., etc.

I present this patient, Mr. R —, who is suffering from a disease which would appear at first sight to be a very trivial and insignificant one. He is forty-three years of age, and I will say has had the disease thirty-three years. You will observe there are numerous reddish-brown patches distributed over the body; particularly are they marked about the trunk. He says that during the last ten or twelve years the disease has been rather more markedly present than previous to that time. He further tells me that the patches are more prominent after bathing, also after he has been on a spree. He is addicted to the use of intoxicants to a greater or less extent.

I wish the members would make an examination of the case, and venture a diagnosis. I will reserve any further remarks until after I hear an expression from those who care to speak to the subject. I will say, however, that I have made a diagnosis.

DISCUSSION.

Dr. E. R. Palmer: This patient was under my care some years ago for urethral stricture, and at that time my attention was called to this affection of the skin. I made the diagnosis then, as I still think it to be, of psoriasis. The length of time he has had the disease, the tendency to get well and to recur, and the coalescing character of the patches, the psoriatic character of them, led me to make that diagnosis. Whether psoriasis is a neurosis, and whether most of the skin diseases are not neurotic in character, I am not prepared to say. I have only studied skin disease in its relation to syphilis, in order that I might differentiate between the two. I shall be very glad if Dr. Bloom will show me if I am right or wrong.

Dr. I. N. Bloom: The case is one which is rather rare, and although it presents some atypical features, nevertheless it may be recognized. I had hoped a further questioning would bring out some of the more important points in connection with the diagnosis. The man for twenty-three years had a breaking out on the body; itching was considerable, but not very intense in character. For the last ten years the condition of affairs now present has existed. When he does not bathe frequently, that is if he goes two or three weeks without bathing, and the weather is fairly warm, the eruption can scarcely be seen, and itching is slight, sometimes absent. Just now you will observe that the eruption is very marked; a bath was taken last night; if he does not bathe again in a week and applies salves, the eruption will almost entirely disappear. The patches, as you will see, are made up of coalesced individual papules; you will find no other signs of an eruption, except these papules which coalesce, forming a patch. There is only one disease of which this may be said, and that I will mention in a few minutes. There is no scaliness; none can be seen now, as he took a bath yesterday, and if there were any scales they of course came off in the water; it is safe to say, however, that there have been none at any time. No scales could be found on the bed clothes, and there are no characteristic indications of psoriasis; then the constant presence of the disease is another evidence that it is not psoriasis. Psoriasis, however severe in form, can be at least temporarily cured. I am accustomed to say to my patients that I can cure them of the psoriatic eruption, but I cannot tell or promise that it will not return in six days, six weeks or six months; that I do not know how soon it will come back. My rule is not to promise that the cure will be a permanent one, and to tell my patients frankly

that I cannot promise for what length of time their well-being will last.

I wish to call especial attention to the shape of the patches in this case; that they are not regular or round, but are hexagonal in appearance, which is another characteristic of but one disease. If you select a single papule and examine it under the magnifying glass, you will see it is not round, as are other papules, but the shape is polygonal.

The diagnosis I have made in the case is *lichen ruber planus*. I must admit that it is at first sight not very well marked, and not easy of diagnosis. I will state that I had the patient make four or five visits to my office, and not until I had seen him shortly after having taken a bath was I absolutely positive about the diagnosis. This disease, as you know, is one that may last a lifetime, but which can be controlled and often cured. I believe, although I do not wish to take too much credit to myself, he has made me ten visits, and expresses himself as being very much more comfortable since he has been under my treatment, except the last week, during which time he has taken two baths.

As to treatment: You may remember Hebra states that his first fourteen patients suffering from *lichen ruber planus* all died, until a specific was really found for it, and it is one of the few drugs which can be called a specific; that drug is arsenic. In Vienna, for twenty-five years arsenic has been given almost exclusively, and none of the patients die. Some of you may remember the very large photograph of a colored man that I had under observation at the city hospital, a very pronounced neglected case of *lichen ruber planus*.

Eight years ago Unna introduced to the profession a salve which he claimed, if not a specific, was one which would cure this disease in most all cases; and now Unna's salve is one of the best anti-pruritic salves known. It consists of a 4 per cent. solution of carbolic acid, one-fifth of 1 per cent. bichloride, made into a paste with equal parts of lanoline and white vaseline. This makes an excellent ointment, and one which can be absorbed by the skin.

I have had fifteen cases of lichen ruber planus, and in all except one a cure has been effected. In one case a lady from another State consulted me, and after a thorough examination I made the diagnosis of lichen ruber planus; she said she had had the disease for thirty or forty years, and that others had made the same diagnosis. She had consulted several prominent physicians of New York and elsewhere. When I told her what the disease was, she said that Tilbury Fox, of London, had made the same statement. This case did not recover, and is the only case in which I have made a failure. When patients become accustomed to taking arsenic and it has been demonstrated just how much they can take, then the cure is comparatively easy, and the patient can report to the physician once in two or three months after a lapse of time. The patient before us is now taking eighteen drops of Fowler's solution twice daily. This dose is borne well, and produces no disturbance of the stomach or other evidence that eighteen drops is too large a dose.

Eczema can be excluded, from the fact that the man has had the disease for thirty-three years, which would be out of the question in the acute form, and if chronic there would be considerable thickening of the epithelium; it would be extreme, more like callus, even under treatment. Furthermore, instead of there being a thickening, if you will observe closely, you will find rather an atrophy of the whole epithelium. I gave him the antiseptic salve of Unna, which has recently been changed to one that does not possess any odor.

Dr. E. R. Palmer: Is not lichen ordinarily regarded as a parasitic disease?

Dr. I. N. Bloom: Never.

Dr. E. R. Palmer: My suggestion is based upon the fact that we know the lichen which forms upon the bark of trees is a fungoid growth, and the question might naturally be asked, Is it not the popular idea that lichen affecting the human race is also parasitic in origin?

Dr. I. N. Bloom: In this connection, another patient of mine had this disease—and still has it, for that matter. I only mention the case to illustrate how some physicians

* Stenographically reported for this journal by C. C. Mapes.

are in the habit of treating such cases. I had diagnosed the case as one of *lichen ruber planus* and put the patient on arsenic. The man, not feeling satisfied, asked permission to consult another physician, and told him how I had been treating him, but did not name the disease. The physician did not say anything, but gave a significant laugh, and withdrew the arsenic, giving the patient another prescription. After the arsenic had been stopped three or four weeks, the eruption returned. He went back to the doctor and said: "Doctor, I told you if I stopped taking arsenic the breaking out would recur." "Why," the doctor said, "I gave you arsenic"—while the fact is, he had given him bichloride of mercury, thinking it syphilis. The patient went to Chicago and consulted Dr. Ziessel, who, after an examination, pronounced it a case of *lichen planus*. "But," the patient remarked, "that is not the diagnosis Dr. Bloom, of Louisville, made;" producing his memorandum book, he showed the doctor what had been written therein as my diagnosis—*lichen ruber planus*. The man went to Europe for a short time, and I gave him letters to several of the more prominent dermatologists in the larger cities of the old country, including Lassar, of Berlin. I asked him not to tell Lassar what diagnosis I had made. After an examination, Dr. Lassar unhesitatingly diagnosed the case *lichen ruber planus*.

FRENCH MEDICAL SOCIETIES.

ACADEMY OF SCIENCES.

Aggravation of the Effects of Certain Microbic Toxines by Their Passage Through the Liver.—It is known that the liver possesses a retentive and protective power against poisons. From the experiments of MM. Tessier and Guinard, it possesses also the property of aggravating the effects of certain microbic toxines when introduced by a vessel belonging to the portal system. By injecting toxines of the diphtheritic bacillus or of the "pneumo-bacillus bovis" into the portal system and the jugular vein, these experimenters have concluded that the results were more grave, and that death followed more quickly in the former than in the latter case.

ACADEMY OF MEDICINE.

Functions of the Stomach After Gastro-Enterostomy.—M. Desore presented the case of a patient who had undergone gastro-enterostomy for a cancer of the stomach, operation performed by M. Terrier. The patient had gained thirty-four pounds in weight in three months, despite the difficulties of the mechanical functions, removal of the pylorus, and of the chemical absence of the chlorhydric acid of the stomach. Gastric exploration shows that the refulent bile and pancreatic juice produced no inconvenience. Another interesting point is that the cancer seems to have succeeded to an ulcer, and to have been ingrafted upon the cicatrix.

M. Johannes Chatin observed in the sclerotic of a saurian—the Gecko—a cartilage with ramified cells, as in the cranial cartilage of the cephalopoda. The change to cartilage—"chondrification"—is effected by a very peculiar process, so that it might justly be likened to an ossification arrested in its progress of evolution, and constitutes a veritable intermediary stage between the osseous and cartilaginous tissues.

BIOLOGICAL SOCIETY.

President, M. Fere.

M. Renon, pursuing his researches upon the aspergillo-pseudo tuberculosis, has endeavored to immunize animals against the aspergillus by means of toxines. The mushroom did not produce toxines by the usual methods of culture, and he employed the serum of the rabbit, killed by aspergillar tuberculosis, but without success. An attenuation of the spores by union with antiseptic products, such as those of silver, did not prevent their virulence, nor did the attenuation by heat. On the contrary, the injection of the spores in repeated and increasing doses produced a toleration, and survival of the animal.

M. Bourguet investigated the emulsion developed by

the "aspergillus niger," and decided that, in its nature and its reactions upon the glucosides it resembled the emulsion of the bitter almond.

M. Courtejeau exhibited a dog affected with paraplegia, with the preservation of certain involuntary movements following section of the sensory branches of the lower limbs.

M. Azoulay described the course and ramifications of the nerves of the kidneys, embracing those of the glomeruli, by a new method based upon the employment of the salts of silver or mercury.

M. Luys exhibited a series of brain moldings and portions, hardened in such a manner as to permit dissections of the brain fibers.

ACADEMY OF MEDICINE.

President, M. Empis.

Clinical Studies of Diabetes.—M. Worms recalled the fact that, in the course of his investigations of diabetes, and upon observations made of 707 persons connected with a great industry, he had communicated to the Academy in 1893 the following statistical results: Among the employees of counting houses and public offices or others engaged in intellectual pursuits, he had discovered seven cases of diabetes, while among 667 working people he had not met a single case. These researches have been pursued, and M. Worms now actually reckons ten per cent. of diabetics in the first category. In a general way, it seems to him, from his observations, that the proportion of ten per cent. is the general proportion of the social life of Paris, comprising persons in political life, men of letters, artists, lawyers, physicians, administrative functionaries, and aged from forty to sixty years. This enormous proportion is less alarming than might be supposed, for eighty-five per cent. of these diabetics, according to the personal statistics of M. Worms, who reach thirty years are attacked with the disease, whose evolution is slow, of curable form, and in all cases compatible with long life, provided they receive and maintain proper care and suitable to their conditions. In a communication made by M. Worms in 1889, he presented to the Academy indications of the changes—often occurring daily—among certain diabetics respecting the quantity of sugar produced in twenty-four hours. We find, for example, from eight to ten grammes during the evening, forty to fifty in the morning, or inversely, and the next day fifteen or thirty, and so on per month.

M. Worms presented such a case, continuing ten months from May, 1894, to March, 1895. In all this time the daily variations were from three to fifty grammes, and during this period the patient had observed a mixed and almost uniform regimen; it is difficult to explain the variations, but it is a frequent clinical fact, and must be admitted. The alimentary regimen formulated by Bouchardat—always substituting for the gluten bread, which contains from forty to fifty per cent. of starch, the almond bread, which contains only seven to eight per cent., used in a given quantity and associated with approved remedies, alkalines, opium, quinine—will assure to diabetics of this kind a normal longevity. Among his statistics M. Worms enumerates a certain number of persons, aged more than seventy years—one of them eighty-two—whom he has observed for thirty years, and who continue to be in a very satisfactory condition of health.

Prevention of Alcoholism.—M. Magnau investigated the special asylums devoted solely to alcoholics. He showed their first appearance in America after the war of secession. Thanks to the efforts of philanthropic societies and other charitable measures, these asylums have multiplied, and have given good results.

In England, they continue to be very numerous, but are reserved for rich patients, and require complicated formalities to secure admission.

In Germany, the asylums are well organized, but abstinence is not sufficiently complete; where wine is allowed at meals, relapses are frequent; absolute abstinence, on the contrary, gives thirty per cent. of lasting cures. Recently the General Council of the Seine voted the establishment of an asylum for alcoholic insane, which could receive five hundred men and two hundred women.

What is still needed in Paris—and M. Magnau demanded the insertion of this wish in the deliberations of the Academy—is an asylum for receiving alcoholics, not insane, upon a simple application. He hoped that private philanthropic societies would take the initiative and intervene for the relief of this need. M. Laborde recalled the experiences which he had given upon the dangers of furfural, the lowest type of all alcohols. He showed the relative harmlessness of grape alcohol, and contrasted the gay and lively drunkard with the melancholic and insane drunkard of to-day. The artificial essences of cognac serving to manufacture cognac without the grape, of rhum, to make rum without cane sugar, have been studied, the first by M. Girard, the second by M. Pouchet, and they are dangerous poisons. In vigorous language M. Laborde signaled the drunkenness that existed in the army, and showed the inferior quality of alcohol that is distributed among the troops. Finally, he enumerated the dangers of salicylic aldehyde, contained in bitters in vermouths, and almost as productive of convulsions as the essence of absinth. Bitters and vermouths often contain also the salicylate of methyle, that produces convulsions more tetanic than epileptiform with trembling. The essence of noyau is still more tetanic in its effects. The vinous oils that serve for artificial essences, provoke, after a short period of inoculation, collapse and asphasia. To interdict all these poisonous products, to supervise the harmlessness of alcohols and alcoholic drinks that are sold, to try by moral or fiscal measures to diminish their consumption, these are duties that are imposed upon us. But another essential point is, that the deliberations of the Academy shall be terminated, and its wishes formulated before parliamentary opening.

SURGICAL SOCIETY.

President, M. Auger.

The Button of Murphy, and Intestinal Suture.—M. Chaput, after rapidly exposing the objections made to Murphy's button, showed all the advantages it presents for practising speedily suture of the intestine. M. Terrier completely approved of M. Chaput's method. Every time that he had sutured the intestine or the stomach by this process, the patients had recovered. Let it be understood that he excepted from this number those who had received wounds of so grave a nature that they were literally dead during, or a little after the operation.

Discussion Upon Appendicitis.—M. Quenu gave his conclusions upon the treatment of appendicitis. According to him, it was necessary to interfere in acute appendicitis where there was puffiness. It is advisable to temporize in sub-acute appendicitis, and in that in which there is an acute beginning and a sub-acute progress. The intervention should consist of an incision at the swollen point, with drainage with iodoform gauze. M. Nelaton presented another form of appendicitis with peritonitis and numerous cysts. These secondary cysts without general peritonitis are obscure and of difficult diagnosis. The clinical difficulty is to diagnose general peritonitis. The symptoms of false intestinal occlusions should be distrusted. M. Routier cites many cases in which a general peritonitis of appendicular origin was mistaken for an intestinal occlusion or strangulated hernia. The dissociation of the pulse and temperature, the circumscribed pain and local puffiness, the slight meteorism, are signs in favor of appendicular peritonitis, but very deceptive signs. In these cases of false occlusion, it is necessary to be prudent; injections and massage are very dangerous. In such a case, and if there is an intestinal occlusion, M. Routier makes an artificial anus in the coccal region. M. Gerard-Marchand distinguished typhlitis from the appendicitis which is within the domain of surgery. He called attention to the frequency, during the evolution of appendicitis, of sub-peritoneal abscess, which progresses slowly, may spread, invade the peritoneal region, and give rise to frequent errors in diagnosis.

BIOLOGICAL SOCIETY.

President, M. Chauveau.

M. Broca has utilized the serum of the blood of the dog in the treatment of certain cutaneous and sub-cutaneous

tuberculoses, tubercular wounds, lupus and adenites, and he is convinced that the blood of the dog that is made tuberculous locally will ameliorate tuberculous conditions in man, except in cases of profound and suppurating glandular bacilloses.

M. Renon experimented with the aspergillus in pregnancy. For this purpose, he inoculated two pregnant rabbits, in the twentieth day of gestation, with virulent spores of the aspergillus fumigatus. One of them did not go to full term, and in the expelled dead fetus the fungoid excrescence was found. The second reached full term, and the young contained none of the aspergillus, but the mother presented aspergillar tubercles in the kidneys and liver. These facts are comparable to those observed in the course of the tuberculosis of Koch, and seem to indicate that the passage of the bacillus from the mother to the fetus, notwithstanding the apparent integrity of the placenta, depends upon the greater or lesser degree of the infection.

MM. Babes and Kalindero communicated the results of their researches upon the distribution of the bacilli of leprosy in the tissues. The bacilli are widely distributed in the tissues of the leprosy, even those who appear to be healthy to the naked eye. They are found in large numbers in the nerves, and in transverse sections of the nerves, masses of them are seen to form crescents in the sheath of Schwann. This distribution is the special explanation of the nervous symptoms of leprosy.

MM. Gugers and Courtade reported their investigations of the innervation of the muscular coat of the bladder. This muscle is, as is well known, composed of two layers, external and internal. The former of longitudinal fibers, is innervated by the sacral plexus. The internal, on the contrary, formed of circular bands of fibers, receives its nerves from the great sympathetic, and the nervous disassociation corresponds to the muscular. The internal sphincter of the bladder possesses a very feeble sphincter action, as compared with that of the external.

M. Roger showed by experiment upon the rabbit, that edema is not in direct relation with venous lesions. If the observation is made by ablation of the superior cervical ganglion of the great sympathetic, the edema appears, but remains slight. If an injection of the soluble products of the proteus vulgaris, be made in the ear whose veins are tied, a persistent edema remains.

MM. Courmont and Doven addressed a note upon the hepatic lesions produced in the dog by diphtheritic toxines. The same subject was presented by MM. Teissier and Guinaro.

M. A. Pilliet studied the toxic properties of formic aldehyde upon the living tissues. Administered in fatal doses aldehyde kills by the intense congestion of the vis cera rather than by necrosis, as is the result with phenic acid and corrosive sublimate, and like these agents, it is eliminated by the intestines and kidneys. The maximum of lesions is found in these organs.

M. Phisalix investigated with M. Bertram the question of the immunity of serum against the bite of the viper. It appears to be due to the immunizing properties of the blood. A curious fact is that the blood of the hedgehog is toxic to other animals. By heating the blood, the toxic properties are made to disappear, and the immunizing properties are preserved. They are then clearly differentiated, the one from the other.

M. Laborde presented frogs curarized by a new curare produced from plants imported from Brazil; the exact character could not be determined. It is known that they belong to the genus strychnos, and M. Laborde insisted upon opposite effects, curarizing and strychnizing produced from plants of the same family.

MM. Bauregard and Boulard proposed a new classification of the mammifera from the arrangement of their placental cotyledons, single placentas or diffused, and placentas with numerous cotyledons or those without. New researches which they have been able to pursue upon the kinds of the museum, of which they give the details, have enabled them to establish their theory and to show its value.

M. Grechant referred to the presence of pigments in the urine of rachitic children.

ACADEMY OF MEDICINE.

Prophylaxis of Alcoholism.—M. Daremberg showed, (1) by chemical analysis, (2) by experiments made on rabbits, that the old cognacs of mark are infinitely more poisonous than the common brandy. Six rabbits were instantly killed by injecting into a vein of the ear 10 cent cubes of cognac that cost sixty francs a bottle. Seven rabbits resisted the same dose of brandy—*eau de vie*—bought at hazard from a wine merchant. M. Laborde objected (1), The extreme sensibility of the rabbit to the action of alcohol. (2) The variability of tolerance of intra-venous injections, which could always kill, no matter what liquor was injected. He had analyzed cognac which contained scarcely any furfural; the vinous alcohols were more harmless than the rectified alcohols of trade.

M. Magnau agreed with M. Daremberg that all alcohols are poisonous. He had caused dogs to absorb 50 grammes of vinous alcohol, beet root alcohol and alcohol from maize. The result was drunkenness for four or five hours from vinous alcohol, comatose sleep and anaesthesia from beet root alcohol, with loss of appetite the following day. The same effect, with more tendinous twitching, from beet root alcohol. After rectification, the results of all these alcohols continued the same. Moreover, the same accidents occurred from the rectified as from the other alcohols. The question was referred to a commission.

Diphtheritic Angina in Herpetic Form.—M. Landouzy insisted upon the importance of bacteriological examination, which often disproves the first clinical opinions relatively to the extreme mildness or gravity of angina. In 864 cases of angina, only 42 in 100 were the rare diphtheritic angina with Loeffler's bacillus. The others were angina with streptococci, pneumococci, and various other cocci. Mucous syphilitic plates are sometimes secondarily infected by the bacillus of Loeffler, and bacteriological examination is indispensable in a case of syphilitic angina.

M. Dieulafoy reported three new observations of a very grave diphtheritic angina of herpetic form, the prognosis of which was often of very doubtful character. Bacteriological diagnosis is imperative, and should not be delayed, for the efficacy of injections of serum depends upon the promptness of their administration.

A New Local Anæsthetic.—M. Championnière showed that guiacol in solution, one-tenth in olive oil, will soothe the pain of burns. By subcutaneous injection, this oil produces a slower anaesthesia, seven to eight minutes before it is complete, but more durable than cocaine. Tumors may be removed, abscesses opened, for the anaesthesia extends to the inflamed tissues. The guiacol oil succeeds very well in the extraction of teeth. In a great number of applications, in only three has a limited sphacelus been observed, an accident that may be avoided by making the injection deeply.

M. Magitor believed that guiacol oil in dental operations produces an unreliable anaesthesia; sphacelus of the gum is too frequent.

M. Ferrand, after having employed local applications of guiacol in intercostal neuralgia of the phalanges in sciatica, abandoned them because of the collapse, syncope, hypothermia, etc., which they sometimes produce. Subcutaneous injections must be at least as dangerous.

M. Laborde insisted upon the intensity of vaso-constriction produced by guiacol, which explains both the anaesthesia and the possible collapse.

M. Championnière considered the anaesthesia of guiacol more constant than that of cocaine. The scars are always very limited. The doses for injection—5 centigr. min., 20 centigr. max.—have never produced a toxic effect, and cannot be compared to the maximum doses employed in cutaneous applications.

Cystic Angioma of the Orbit.—M. E. Dalude reported a case of cystic angioma of the orbit, cured by electrolysis in spite of the very great vibration. He opposed this harmless method to the dangers of extirpation.

Extra-Uterine Pregnancy.—M. Pinard presented a case that was diagnosed by M. Berger, in the sixth month. After waiting for the period of viability of the fetus, laparotomy was performed. The cyst was very thin, and its walls remarkably vascular. A living child was removed.

The borders of the placenta were sutured to those of the abdominal incision, and on the thirty-second day, its elimination was complete.

M. Pinard insisted upon two practical rules: 1st. To wait for the viability of the child, and to keep the patient as long as possible before the operation in a condition of absolute repose, and so diminish the danger of hemorrhage from the operation. 2d. To suture the placenta to the abdominal wound instead of extracting it. In seventeen operations so performed by M. Pinard, the elimination was generally complete about the twentieth day.

Total Abdominal Hysterectomy in Pregnancy with Uterine Myosis.—M. Guermonprez, of Lille, has performed this operation, and regards it as preferable to that of Porro in a case of pregnancy with uterine myosis. Twenty-eight days after the operation, both mother and child were in perfect health. Total abdominal hysterectomy and the Cesarean section are made without doing away with, or without any sensible modification of the ordinary technique.

The Protection of Infancy.—M. Blache read his annual report upon the protection of infancy in the Department of the Seine, and showed the happy results from the supervision of nurses, the creation of numerous cribs and the extension of vaccination.

J. A. C.

CORRESPONDENCE.

BRODNAX, LA., Sept. 9, 1895.

EDITOR MEDICAL TIMES:

Dear Doctor: In the September Number of TIMES, page 396, I find: "Dr. Annetta Kratz states (*Med. World*) that in her obstetric practice the scrotum of new born male infants of African decent is always black; otherwise they are just like white babies. She wants to know how to distinguish the new born female children of colored people from the Caucasian."

Examination of the perineum of a female infant, whether the parents are both black, one mulatto, or with white father and black or mulatto mother, a distinct line of lighter or darker shade is found to extend from the posterior part of vulva along the raphé to anus, thence up the spine to the junction of the cervical and dorsal vertebrae. Not only does this exist at birth, but through life in bright mulatto women.

In a case in court some years ago, (1858) a white woman was sold as a slave by her brother for the purpose of raising money to "go west." When the woman was brought to Augusta, Ga., she claimed to be a white woman, free born, and claimed her release from sale. The judge, though he believed her a party in the fraud, had her stripped down to the buttocks, and the absence of the discoloration over the spinal processes procured her release from the negro traders.

I have noticed this dark line in several cases in babies where both parents were very bright mulattoes. Another sign which is noticeable in the minimum mixture of negro blood, the baby is not of the clear semi-translucent pink color of purely white children, but of a tallowy white or waxy white.

In several cases where infants newly born have been drowned, intentionally, I have pointed out these distinctions as proofs of white or black parentage.

Very truly, BEN. H. BRODNAX.*

Immunity to Tetanus Induced by Establishing Strychnia Tolerance.—Rummo, the Italian investigator, has recently shown (*Mod. Med.*) that strychnia, which produces physiological effects very similar to those of tetanus, may be used as a means of establishing immunity in guinea pigs against infection of tetanus. After establishing a moderate degree of tolerance to strychnia, guinea pigs were injected with tetanus culture, which was found to be ineffective in most cases, only slightly operative in others, while the controls all died.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York.

Observations on the Treatment of Infantile Diarrhea by Means of Tannigen.*—The action of tannin upon mucous membranes, says Dr. Richard Drews, of Hamburg, has long been known; under this action they become more firm and are shrivelled by the diminution of the intercellular fluids, and by a stronger molecular cohesion. Dr. Lewin has made a study of the action of tannin upon albumen. Tannin precipitates albumin, but the coagulum thus formed is easily dissolved under the influence of an excess of albumen, or under the influence of alkaline carbonates. Peptone is also precipitated, but the amount of hydrochloric acid in the gastric juice is sufficient to dissolve this coagulum. It is for this reason that tannin is unable to alter the peptones in the presence of free hydrochloric acid; the remainder of the albumin assumes the state of tannic albumin and is digested; that is to say, the albumin is peptonized, and the decomposed tannin, which can no longer precipitate it, is directly taken up by the fluids of the body, where it becomes tannic alkali.

The intestinal reaction is simpler still; the tannic albumen is decomposed by the intestinal alkali, and the tannin, having entered the circulation as a tannic alkali, becomes efficacious in the tissues, wherein the action of the free acid neutralizes that of the alkali.

But the excellent effects of tannin in external applications are entirely lost in its administration internally; for example, if we wish to combat catarrhal affections of the intestine. Tannin produces within the stomach precipitates that are only soluble in an excess of albumin; such a surplus of albumin is not ordinarily found in the stomach in sufficient quantities to act when large doses of tannin are given. The mucous membrane of the stomach is then attacked; anorexia, gastric pain with weakness and even vomiting, accompany the action of tannin upon the intestinal mucous membrane. There is a bad taste in the mouth, deglutition is painful, and the tannin is dissolved and so rapidly decomposed that Dr. Moiner, even after the administration of 8 grammes of tannin, was unable to find the tannin reaction in the stools, and only reached 0.1 grammes of gallic acid in the urine.

In the treatment of affections of the mucous membranes of the small and large intestine, astringents must answer to two conditions, they must neither dissolve in the mouth or in the stomach, and in the intestine they must dissolve and decompose gradually, so that not only the upper part of the intestine, but also the membrane of the colon, may be reached by the effects of the remedy.

In order to avoid these inconveniences of tannin, Prof. Meyer, of Marbourg, experimented with ethereal solutions of tannin, which remained insoluble within the stomach and were only gradually dissolved in the intestines, and has discovered a derivative of tannin.

Prof. Meyer has called this preparation tannigen. The Farbenfabriken of Elberfeld, formerly Frederick Bayer & Co., prepare it in large quantity. Tannigen is a very fine powder, of a yellowish gray color, odorless and tasteless, which stands a heat of 180° C., and only begins to liquefy at a temperature of 187 to 190° C. In water, at 50° C., it becomes transformed into a honey-like mass. In dilute acids and cold water it is but scantily soluble, in ether and boiling water it dissolves but slightly, while in cold alcohol and dilute solutions of phosphate of sodium, borax and soda, it dissolves readily, assuming a yellowish color. By continuous boiling in alkaline solutions or by exposure of several days in the cold the compound is saponified and divides into acetic and gallic acids. Tannigen gives with the salt of oxide of iron the color reaction of

tannin. A slightly alkaline solution containing sodium phosphate precipitates lime and albumin; it has an astringent taste, arrests the glandular secretion of the mucous membranes of the frog, and especially presents all the characters of an astringent. The addition of an alkali, or of borax, dissolves the precipitates of lime and albumin.

Dr. Muller has employed tannigen in doses of three-quarter grammes a day, and 0.2 to 0.5 grammes a dose, three times a day, in chronic enteritis, repeated dysenteries and tubercular diarrhoea, with very great success. In most cases, after treatment by tannigen, the number of stools are lessened on the following day, and the stools were less liquid. In a case of repeated dysentery, Dr. Muller was unable to find tannigen or a derivative in the stools, even after doses of 3 grammes of the drug.

Dr. Kunkler, of Bonn, has made since a year, some experiments with tannigen in twenty-five children suffering from diarrhea, with entire success. During the first day of the enteritis Dr. Kunkler gave calomel simultaneously, or in most of the children, naphthalin, in order to disinfect the intestines, and he recommends continuing the tannigen for several days after the purely catarrhal symptoms have disappeared, as a precaution against irritation of the intestine and in order to prevent relapses.

I have used tannigen since a year, in very favorable cases of diarrhea in a large number of children, and with very good success.

Since tannigen is altogether without taste or odor, all the children, without exception, have taken it willingly, and in no case, even in the very youngest children, has the powder shown any unfavorable effect upon the appetite, or has troubled the gastric functions; hence, I was able to give it even to children at the breast, successfully and without pain. I gave it, since it is nearly insoluble, in a spoonful of water or milk, or of milk soup. I never observed vomiting after the admixture of tannigen with milk. In the two or three following days the stools were modified, becoming less numerous and less liquid, and in five or six days the child was cured.

Against these three forms of diarrhea, lienteria, fatty diarrhea, and green bacillary diarrhea, I have also used tannigen with much success, without employing any other antiseptic remedy. Tannigen, which is decomposed in the intestines by the alkaline reaction into acetic acid and tannin, acts through the astringent, antiputrid and antibacterial properties of tannin. The latter lessens the secretion of the intestinal mucous membrane, regulates the hepatic and pancreatic secretions, and acts against the putrid masses which fill the intestine and kills the bacteria. Lewin, of Berlin, was able by the addition of tannin to prevent decomposition for some time in putrid sanguinous solutions, which he kept in open vessels. After four or five days the stools are lessened in number and they no longer are so liquid and fetid. Tannigen proves, in many cases of green and even bacillary diarrhea, more efficacious than lactic acid, which Dr. Lesage has recommended as an antiseptic specific against the bacillus at fault.

In conclusion, tannigen is an excellent remedy in infantile diarrhoeas; it cures the diarrhoeas of various kinds in a short time, by the astringent, antiputrid and antibacterial action of the tannin; besides, it possesses, over most other remedies, the advantage of being tasteless and odorless; it does not disturb the functions of the stomach, and proves harmless even after prolonged use.

On the Administration of the Salicylates in Acute Rheumatism.—(Extracts from a paper read before the Cambridge Medical Society by P. W. Latham, M.A., M.D., Fellow and Senior Censor of the Royal College of Physicians, Senior Physician to Addenbrookes Hospital, Cambridge, England.) "We have now become so familiar with the successful treatment of acute rheumatism by means of salicylic acid and salicylates, that it may seem somewhat superfluous for me to address you on the subject. But cases have come under my observation in which objections have been taken to the use of these remedies, on the ground either that they disagreed with the patient, producing nausea, vomiting, etc., or that notwithstanding

* Translated and excerpted from *Au Journal de Clinique de Therapeutique Infantiles*.

standing fairly large doses of the drug, the pains have not been relieved, the temperature has not been reduced, or, most serious of all, cardiac or other complications have arisen during the time the patient was taking the remedy, and when, apparently, he was under its influence. Now it is in preventing the development of these complications that, when properly administered, the remedy so strikingly shows its power, truly acting as a distinct specific.

"In my Croonian lectures in 1885, I spoke, *apropos* of rheumatism, as follows: 'Here is a disorder which, under different treatment, may exist for weeks, stationary, so to speak, in its intensity, the great heat and nervous and vascular excitement and pain and swelling exactly of the same amount to-day as they were weeks ago; a disorder which, less than fifty years ago, was said to be often such in itself, and such in its appalling incidents, as to need, from time to time, that medicine should put forth the full compass of all its powers. Every organ, or system of organs, which either directly or indirectly can receive the impression of remedies, are from time to time called to bear all that they can possibly endure; and it is often only when the powers of medicine are pressed even to the verge of destroying life that life is saved.'

"And now, with or without the administration of a purgative, as the occasion requires, the patient is placed fully under the influence of salicylic acid, and in from forty to sixty hours, not unfrequently in a shorter time, the pains in the joints have subsided, the limbs can be freely moved, and the bodily temperature has reached the normal condition. But more than this—and here the remedy shows its signal power—in no case of rheumatism that has come under my care during the last six years, either in hospital or in private practice, has there been developed, where the heart was previously sound, any cardiac complication, such as endocarditis or pericarditis. If this can be maintained and ensured, we have, indeed, in our hands, a most potent remedy. Cardiac complications constitute the chief danger of acute rheumatism, and the danger, if the disease is taken in hand soon enough, may, with our new remedy, be averted."

"Eight years' further experience has only confirmed what was then stated. I have seen numbers of cases where complications have been developed before the patients came under my care, but I feel strongly that these complications might be prevented, or at least materially lessened, by earlier and more energetic treatment, and it is for this reason chiefly that I venture to address you to-day.

"Now, what are the conditions to insure success?

"Principally, the true salicylic acid obtained from the vegetable kingdom must alone be employed. If you have to give large doses, avoid giving the artificial product obtained from carbolic acid, however much it may have been dialysed and purified. An impure acid will very quickly produce symptoms closely resembling delirium tremens.

"The causes of failure with this remedy, as far as I have been able to judge, are:

- "1st. Insufficient doses at the commencement.
- "2d. The non-administration of a purgative.
- "3d. Feeding with substances other than milk, such as beef tea, broths, etc., especially in the earlier stages.

"As this plan of treatment works prosperously day after day in its immediate effects, so day after day it gives an earnest of the remedial impression it is exercising upon the whole disease. It abates the fever, it softens the pulse, it reduces the swelling, and it lessens the pain. In short, it subdues the vascular system like a bleeding, and pacifies the nervous system like an opiate; and often in the course of a week, the acute rheumatism is gone. In three days, there is often a signal mitigation of all the symptoms; and in a week I have often seen patients, who have been carried helpless into the hospital and shrieking at the least jar or touch, or movement of their limbs, risen from their beds, and walking about the ward quite free from pain.

"Now, if in the treatment of acute rheumatism, you were to choose one indication and abide by it, and were to trust one class of remedies and to it only, you would find more cases that admit of a readier cure by the method

now described than by either of the two former. You would find the aggregate of morbid actions and sufferings, which constitute the disease, more surely reached and counteracted, and more quickly abolished by medicines operating upon the abdominal viscera only, than by those which influence either the blood vessels only or the nerves only.

"I would still recommend that the natural salicylic acid, or its salt, should be employed, in preference to the artificial acid, when large doses are administered. I admit that what are termed the 'physiologically pure' preparations may be as good, but I prefer using the natural products, owing to the complete safety which, with ordinary care, attends their administration. In a paper in the *British Medical Journal* of December 10, 1881, I first called attention to the danger of using the artificial acid. The impurities then existing in it amounted to as much as 15 per cent. By improved methods of preparing it, in 1884, these impurities were reduced to 5 per cent., and now it is so carefully prepared that the product is said to be 'physiologically pure.' In the *Pharmaceutical Journal* of November 22, 1890, you will find a very exhaustive paper by Professor Dunstan, giving an account of these impurities, with a report, also, by Professor Charteris, of the poisonous effects which two of these impurities, viz., ortho-cresotic acid and para-cresotic acid, have on the animal system. The same journal also contains a report of an interesting discussion on the subject which took place at the Pharmaceutical Society."

Oxygen in Opium Poisoning.—W. J. C. Merry reports in the *Lancet* a case of opium poisoning treated by inhalation of pure oxygen. This was given in such a way that only the pure gas undiluted with air was inhaled, and this was continued without interruption for twenty minutes. Under this treatment the livid color of the skin disappeared, the respirations occurred more frequently and fuller, the pulse improved, and the patient made a speedy recovery.

Iberis Amara in Heart Disease.—Candytuft (*Iberis Amara*) has a direct action on dilated heart without resultant or with deficient hypertrophy (*Med. Age*). It lessens force and controls violence and irritability. It overcomes the dyspnoea, vertigo, general feeling of weakness and other reflex symptoms of these cases. In bronchitis, asthma, dyspnoea, dropsy or jaundice of cardiac origin it is one of the best agents, in some cases acting magically. Galen used it in rheumatic affections. A few drops of the tincture is the dose.

The Bicycle in Treatment of Flatfoot.—The bicycle as a machine for remedial exercise is now much spoken of. Brunelli, of Milan, advocates its employment in the treatment of flatfoot, believing that it affords needed exercise to the most debilitated muscle groups controlling the ankle, with the foot in a favorable position, and with superincumbent weight largely eliminated.

Phytolacca Decandra for Epithelioma.—Dr. E. G. Goodman claims (*North Carolina Medical Journal*), that the green juice expressed from the leaves of the above-named plant and made into a plaster has a specific action on epithelioma. It has a selective action, he says, for the morbid tissue; follows out all the irregularities of the epithelioma; causes, as it were, its liquefaction and removal, and then acts as a cicatrizant for the open sore. Dr. Goodman states that under this treatment he has seen large epitheliomatous masses destroyed in a few weeks, and nothing but a faint scar left at the place occupied by the growth. The remedy causes severe pain, but may be used fearlessly, as it does not endanger the patient.

Tearing Out of Nerves as a Cure for Neuralgia.—Adenot, of the French Congress of Surgery (*Revue de Chirurgie*), advocated, in neuralgias, section of the nerve as high up as possible, then seizing the peripheral end with a pair of forceps it is to be wound around it until as much is removed as possible. Eight or ten centimeters can thus be taken away. Good results have been obtained by this method of treatment by Molliere, Tripier and Gangolphe. Chipault also spoke favorably of the method, having had complete success with it in a case of neuralgia of the forearm which had previously resisted section of the ulnar nerve.

RETROSPECTIVE DIETETICS.

Strawberry Sore-Throat.—Dr. E. L. Vansant writes in the *Philadelphia Polyclinic* that for a number of years his attention has been annually directed to a condition of the throat, occurring during the strawberry season, and directly connected with the use of strawberries as an article of diet. This connection has appeared to him so intimate, that the name, strawberry sore-throat, seemed appropriate. The season which has just passed has been very prolific in such cases, he says, a result due to the plentiful supply of the berries. The majority of cases observed occurred in patients of a rheumatic or gouty disposition. In a smaller number of cases, however, no such disposition could be detected, but in these, a history of a very liberal use of the berries was obtained. The patients were all adults, and stated that the sore-throat came rather suddenly. As a rule, some slight exposure to a draft was given as a cause. The throat, in every instance was quite painful. In a number, a slight rise of temperature was present. The voice was rather thick and inclined to be husky. Two of the patients were singers, and here the singing voice was much disturbed. The patients were inclined to clear the throat by hawking, but marked cough was rarely present, and only when the larynx was implicated. Considerable digestive disturbance was present in many of the cases, the tongue being furred, the bowels constipated or moving too frequently, the urine high colored, of increased specific gravity, and containing a considerable amount of urates. The author adds that the injuriousness of strawberries to persons of a gouty or rheumatic diathesis is generally recognized, and that many of the symptoms observed could have been termed lithemic, but also calls attention to the fact that a like effect may be produced by strawberries in those not gouty or rheumatic.

The Diet of Epileptics.—The influence of diet upon epilepsy (*Brit. Med. Journ.*) is a matter of peculiar importance in the treatment of the disease. In a certain sense epilepsy is always reflex. The starting-point of a fit must be looked on as an extrinsic irritation, and in many cases it arises from indigestion. Errors in diet, however, probably influence epilepsy in other ways than this. The portion of food which is absorbed may be injurious, besides that which, remaining undigested, acts as an irritant, and there is a good deal of clinical experience in favor of supplying a minimum quantity of meat in cases of this sort, not on account of its producing indigestion, for it is often digested quite well, but because of its imagined effect in increasing the "irritability" of nervous structures—a somewhat hypothetical property, but based on the same sort of rough observation as is the well-recognized relation between corn and skittishness in horses. The interest in this subject has led us to make inquiries as to the food given to the patients at the epileptic colony at Chalfont St. Peter, and by the courtesy of the secretary we have been furnished with the daily dietary for a fortnight. Breakfast was on each day the same, consisting of oatmeal porridge, with new milk or sugar, tea and bread and butter. Dinner consisted of roast or boiled or hashed beef or mutton, with cabbage or potatoes, followed by a rice, sago, tapioca, suet, or jam-roll pudding. Tea was accompanied with bread and butter or dripping, or sometimes golden syrup, or currant cake. Supper generally included some pudding, with milk and bread, varied occasionally with soup instead of pudding. On Fridays fish was given instead of meat. It must be noted that all the inmates are men. At the present time they are nearly all engaged in outdoor work for a considerable number of hours a day, which probably enables them to assimilate without difficulty a somewhat freer diet than would be possible in other conditions; and it is not improbable that the improved nutrition, due to the combination of active work with a dietary better than could be digested in a sedentary life, may be a not unimportant factor in relieving the disease.

Diagnosis of Apoplexy.—Geo. J. Preston, M.D., writing on the diagnosis of apoplexy, considers (*Med. Fortnightly*),

the presence of an increased temperature and paralysis as the two most important among the various symptoms by which we distinguish the condition from alcoholic or uræmic coma or morphine poisoning. The fever is of much value as a positive, but of little as a negative sign; and usually consists of a rise of one or two degrees, while a rise of four or five degrees indicates a fatal termination and is an important prognostic sign. Of even greater diagnostic importance than fever is the presence of paralysis; but this, in a comatose patient, is difficult to elicit. The best means of demonstrating paralysis in this condition is to test the lower limb with a pin. The paralysed limb will be jerked away much more feebly than the normal one. Convulsions, when present in apoplexy, point to involvement of the cortex or corpus striatum. The writer does not discuss the differences between cerebral hemorrhage, embolism and thrombosis; it might not be out of place here to give Dr. Gower's differentiation, as given in his clinic at the Queen's Square Hospital, London. Among many signs which separate these conditions he gives the following: "Cerebral hemorrhage: Onset sudden, consciousness lost; cerebral embolism: Onset not quite so sudden, consciousness not lost; thrombosis: Onset more gradual, consciousness not lost, but attack is usually preceded by prodromal symptoms, as headache."

A New Sign in Locomotor Ataxia.—Biernacki reports a new sign in locomotor ataxia. (*Univ. Med. Jour.*) He has observed that in many cases of tabes no pain is experienced when violent compression of the ulnar nerve is made, though the usual tingling of the fingers is felt. This condition is present in 75 per cent. of his cases, and occurs in no other form of organic disease that might be mistaken for tabes.

An Important Modification of the Process of Securing General Anesthesia.—Rosenberg, of Germany, has made an improvement in the process of anaesthetizing a patient that obviates many of the inconveniences, discomforts and dangers of anesthesia (*Med. Welta.*). As is well-known, the anesthetic vapors are very irritating to the superficial nerves of the mucous membrane of the respiratory tract. On this account, reflex accidents are liable to occur, most likely to affect the heart, especially in the early stage, and also in the awakening stage, of chloroforming.

Dr. Rosenberg overcomes that danger by first spraying the nasal passage with a 10 per cent. solution of cocaine, repeating the spraying every thirty minutes if the anesthesia is prolonged, and repeating it at the close of the anesthesia, however short the period may be. He administers the chloroform by the "drop by drop" method. In addition to the specific effects upon the nerves, cocaine is antitoxic to chloroform. Thus, by successive steps, the improvements in anesthesia are reducing the dangers of that condition until it seems to be safer to undergo anesthesia than to get aboard a railroad train. The administration of heart tonics before the operation, spraying the nostrils with cocaine, the administration of the anesthetic by the drop by drop method, all reduce the probability of accident. In case accident should occur, forcible dilatation of the rectum, regular traction upon the tongue and stimulating the heart by rapid, forcible pressures of the hand over the cardiac region, offer a pleasing promise of resuscitation.

Concerning Abscesses.—The following is from "Golden Rules of Surgical Practice," a recent English publication, as quoted in the *Medical World*:

Never forget that:

1. Abscesses near a large joint often communicate with the joint.
2. Abscesses near a large artery sometimes communicate with the artery.
3. Abdominal wall abscesses sometimes communicate with the gut or solid viscera.

Never forget that early openings are imperative in abscesses situated:

1. In the neighborhood of joints.
2. In the abdominal wall.
3. In the neck, under the deep

fascia. 4. In the palm of the hand. 5. Beneath periosteum. 6. About the rectum, prostate, and urethra. To wait for abscesses to "point" or to "burst" in these regions is culpable as well as cowardly.

Remember the frequency with which hematoma and traumatic aneurisms have been mistaken for abscesses, and incised with untoward results. Do not open an abscess anywhere near a large artery without first using a stethoscope, and then only by Hilton's method (*i. e.*, scalpel, director, and dressing forceps).

Never, under any circumstances, use for exploratory puncture that surgical abomination, a grooved needle, for it will allow contamination of all the tissues through which it brings the fluids. Never plunge in opening abscesses; never squeeze the sac after doing so.

Do not forget that your incision should be radiate: 1. In abscesses pointing near the nipple. 2. In abscesses near the anus. 3. In scarifying the chemosis of the cornea. And that your incision should be longitudinal: 1. In the hand. 2. In the urethra. 3. On the vertex. Do not forget that incisions for abscesses in the neck and face should run parallel with the wrinkles and folds.

Do not be afraid of hurting the lacteal tubes in mammary abscesses. More harm is done to the gland by the enlargement of the walls of the abscess than by a free incision.

Never make a Palmer incision except in the middle of the lower third and in the axial line of the fingers or at the sides of the palm.

Do not forget, in opening a deep abscess in the lumbar region without the projection of the abscess, to cut down opposite a transverse process, not between them, for fear of wounding a lumbar artery.

The Transmission of Typhoid Fever by the Air.—Investigations on this subject have been made by Dr. Licard, of Beziers. His plan of experimenting was to have patients suffering from this disease breathe through tubes into water that had first been sterilized. Specimens of water thus treated were frequently found to yield the bacilli under cultivation. The bacilli were not always found, but this is not a matter of surprise when it is considered that the best bacteriologists frequently fail to find them under conditions strongly suggestive of their presence. Dr. Licard's results were, however, sufficiently uniform to warrant an inference that the expired breath of typhoid patients, like that from those having typhus, may serve as a channel for fever infection. The vast majority of typhoid infections have their origin in a contaminated water supply, but every observer has been puzzled more or less by cases of the disease which have arisen apart from any known inculpation of the drinking water. These cases of obscure origin may originate from two cases whose bacillary contact is atmospheric—not simply by means of the breath of the sick, but also by emanations from sewers, cesspools, and other receptacles of typhoid dejections.

Chloral Hydrate in Labor.—Chloral hydrate, says Dr. Jno. E. Gardner (*Lancet*), has a great effect in assisting dilatation of the os uteri and relaxing the rigidity of the perineum. No post-partum hemorrhage follows, nor is there any delay or difficulty in the expulsion of the placenta. The chloral, I think, might take the place of chloroform, if given in a small, repeated dose during the long and tedious labor of the primipara. It does not seem to diminish the expulsive power of the pains, as I have often noticed in chloroform cases. I submit that the chloral might be further tried in place of chloroform in primiparae in order to relieve the rigid perineum and so avoid having to use forceps. Chloroform, in my experience, is attended with a great tendency to post-partum hemorrhage, which I have never seen after the use of chloral in labor. For many years I have from time to time experienced its boon to the poor, worn out and anxious mother, despondent with fear. After a dose of the chloral, the frenzy passes off, and the patient settles down to her travail, which has a happy and speedy result.

A NEW OPERATION FOR VARICOSE VEINS.

By far the best operation with which I am acquainted for the radical cure of varicose veins of the leg, and the several complications which may arise, is the one recently practiced by Schede, of Hamburg. After throwing an elastic tourniquet around the thigh, to be tightened, if necessary, a circular incision is made just below the knee joint, the knife being carried, as in a circular amputation, down to the fascia enclosing and forming the sheaths of the muscles. This incision will divide all the veins going to form both of the main trunks of the internal and external saphenous veins. All of these branches should be carefully ligated with catgut, and the flaps or edges of the wound accurately approximated by stitches. If deemed advisable in any particular case, I would recommend that additional ligatures be applied to the main trunk or trunks of the internal saphenous vein, through suitable incisions. After operating in this way, it will be found that the passive exudation will quickly disappear, and that ulceration, if present, will soon change its character from that of the indolent or callous type to the healing, healthy variety, and rapid cicatrization will ensue.

All methods of treating edema and ulceration, other than by a radical operation upon the veins, are only temporarily curative. Skin grafting or transplantation of flaps with pedicles may result in healing or covering of exposed surfaces for a shorter or longer period; but relapse is certain so long as the original cause of stagnation in the circulation, with resultant malnutrition, is not overcome. The circular incision method of operation, just described, can be performed by any practitioner capable of doing any cleanly operation in surgery, and is one which I can highly recommend. A scalpel, several hemostatic forceps, reliable catgut for ligation, a needle and some sterilized silk for stitches make up the armamentarium required. The patient should be kept quiet for a week or ten days, when probably the first change of dressings will be made, and the cure practically effected.—*Int. Jour. Surgery.*

LOUIS PASTEUR IS DEAD.

Prof. Louis Pasteur, the eminent bacteriologist, died at 5 P.M. in Garches, near St. Cloud, in the environs of Paris, September 28th.

Louis Pasteur, the great French chemist, is known in this country chiefly on account of his discoveries in connection with hydrophobia, but these discoveries crowned a long life of research, the results of which greatly enriched science. His inoculation for rabies is exactly in the line of vaccination. Though the disease that it combats is vastly less important than smallpox, by reason of its rareness, scientifically what he found out was almost as wonderful as the magnificent find of Jenner. Pasteur was a great contributor to the department of bacteriology, and his name will live in history.

He was born on Dec. 27, 1822, at Dole, in the Department of the Jura, France, and was therefore nearly seventy-nine years old at the time of his death. He entered the university in his eighteenth year, and graduated as a physician in 1847. Then he went to Strasburg, and in 1848 was appointed Professor of Physics at the Faculty of Sciences. In 1854 he organized the Faculty of Sciences at Lille and became its Dean. In 1857 he took charge of the scientific direction of the normal school, in Paris. In 1869 he became professor of geology, physics and chemistry at the Ecole des Beaux Arts, and was elected a member of the Institute of France.

He made important discoveries bearing on the polarization of light, and for these, in 1856, the Royal Society of London awarded him the Rumford medal.

He received the Legion of Honor ribbon on Aug. 12, 1853, and he became an officer of the order in 1863, a commander in 1868 and a grand officer of the legion in 1878.

In 1869 the Royal Society of London made him one of their fifty foreign members. On April 27, 1882, he took his seat in the French Academy.

There you have the skeleton statistics of his life. None of the decorations that he received could have added lustre to his name. No one in estimating Pasteur ever thinks of the number of medals or badges upon his breast. He least of all counted them.

His work relating to medicine and the cure of disease, has been divided into four great departments. He first studied and threw light upon the different forms of fermentation, then studied the diseases of silkworms, thirdly the dreaded disease anthrax, and lastly rabies, in which he did his best work.

Chemists used to think that fermentation was a chemical process, and that it was produced by the oxygen in the air. Pasteur proved that it is caused by microscopical plants, by microbes, and that each fermentation or each form of change in organic matter has its special microbe. Since these microbes are the reductive agents of organic matter, they are the regulators of life on the globe. They incessantly reconstitute the water, air and soil, so that each new form of life can find that whereon it lives. If everything that has lived were not destroyed, or, rather, were it not again divided into elements, there could be no new life. All the material available for the creation of organic matter would soon be used up, if organic matter, once made, were indestructible. A man dies, and by the process of fermentation or putrefaction that of which he was made is gradually set free and becomes available for the manufacture of another man. Pasteur did not find this out, but he did discover the nature of the process by which it is accomplished. He proved, too, that there is no such thing as spontaneous generation, but that every form of life, however small, can be attributed to a germ.

Then he studied the sickness of silkworms. The silkworms of France suffered from a mysterious disease, and no one could find any clue to its origin or nature. It was a sort of leprosy, that covered their skins with brown spots, deprived them of appetite, and caused them to waste away. The health of the silkworm means millions of dollars to France.

Pasteur made the wonderful discovery that the strange, dark spots on the worms were living parasites, and that one silkworm could get the parasite from another, just as a dog may acquire fleas. They got the parasites by contact with contaminated food, by inoculation of the skin, and by atmospheric dust. He stamped out the disease by inflicting the death penalty upon all infected insects, by quarantining suspects and by hygienic methods, just as a smallpox epidemic would be attacked by a Board of Health. That method, now every one knows it is right, seems simple enough, but simple though it was, no one knew much about it till Pasteur told them.

It was while working over sick silkworms that the chemist became first conversant with principles of bacteriology, that he afterward applied in the treatment of human beings.

In 1850 Davaine and Rayer found in the blood of animals killed by anthrax small filiform corpuscles about twice the size of a blood corpuscle. These, it was supposed, were some product of the disease. Pasteur was the first to find that they were a parasite and the cause of it. He isolated the micro-organism of anthrax and cultivated it in beef soup. By inoculation he found he could produce anthrax with the germs, and that proved his case. Further studies showed him that anthrax was peculiar to certain localities, and that it would break out without apparent reason.

Bearing in mind his own repeated declaration that there was no such thing as spontaneous generation, he dug deeper. He found that if an animal that died of anthrax was buried a yard deep it would still be a center of infection. He found that earthworms ate the parasites, brought them to the surface and left them there as seeds for other animals to eat. In this way anthrax is propagated. The remedy for that sort of distribution is obvious.

It was in 1880 that Pasteur began his work upon rabies. He found that the virus of this disease exists

in a pure state only in the nervous system, brain, medulla oblongata, spine or nerves of a dog or rabbit killed by rabies. He found that by inoculating with the virus the uncertainty of incubation is done away with, and that treatment is made simpler.

He attenuated the virus—that is, he treated it so that its virulence was lessened. A patient taking the disease from the attenuated virus would have it only in a mild form, and subsequently be immune from another attack. That is, roughly stated, the principle of vaccination. It was found that dogs that had been bitten by dogs known to have rabies, when inoculated with the virus usually recovered, or rather failed to develop rabies. In other words, they were vaccinated.

After endless experiments with animals, Pasteur, in July, 1885, tried the inoculation upon a boy named Meister, who had been bitten by a mad dog. The treatment proved successful. After that it was tried again, and in each case it seemed to succeed.

One of the points about Pasteur's discovery that tended to make it seem less important to scientific men was the sudden increase in cases of alleged hydrophobia. Physicians had recognized this as a rare disease, but with the establishment of Pasteur Institutes every one stood in fear of developing it, and thousands of persons who in all human probability were never in danger of rabies had themselves inoculated. Some doctors claim the existence of a false hydrophobia, a sort of hysterical affection produced by the fear of the disease and simulating its symptoms, and it has been said that the "Pasteur scare" multiplied this. But of course that was not Pasteur's fault.

The French chemist worked also upon inoculation for other diseases than hydrophobia. He gave to the scientific world a vast quantity of facts on bacteriology. Physicians consider that Pasteur opened a door, and that it will be for others to penetrate further into the mysterious recesses of bacteriology.

Pasteur's life was not long enough for him to work out his discoveries; nor would any man's be.

In 1892 Pasteur inoculated animals for cholera, and the experiments proved successful. A trial was made of the inoculation of a man, but it was not conducted under conditions satisfactory to the medical world, though there was a good deal of faith among many learned men in its efficacy.

That the French Republic is not altogether ungrateful, is shown by the fact that it gave Pasteur a life annuity of 12,000 francs (\$2,500), for his discoveries, chiefly for those bearing on fermentation.

Don't use soap and water on the body just preceding the application of cocaine; the alkali destroys the anaesthetic action.

It is said that the tendons found in the tail of a dog make better sutures than either catgut or kangaroo tendon, when properly prepared in sublimate.

It is said that carbolic acid, if dissolved in glycerine or alcohol, is not caustic, whatever be the degree of concentration. A small proportion of water added to the alcohol or glycerine solution will cause it to act as a caustic.

Aluminum is not proving to be of such value for surgical instruments as was expected. To be sure, it does not oxidize, but it is deficient in elasticity, and stays bent after pressure. It is also so light that the surgeon does not feel as if he had hold of anything when grasping a knife made of it.

The authorities of the Smithsonian Institution have awarded the Hodgkins prizes as follows: First prize of \$10,000 to Lord Rayleigh and Prof. Ramsay, of London, for their discovery of argon as a constituent element of the atmosphere. The third prize, \$1,000, to Henry De Varigny, of Paris, for the best popular essay on the properties of the atmosphere, entitled "L'air et la Vie." The second prize of \$5,000 was not awarded, none of the contestants having fulfilled the conditions.

THE NEW BUILDINGS FOR THE COLLEGE OF PHYSICIANS AND SURGEONS.*

Columbia College feels a great and just pride in its medical department, which, since 1860, has been the College of Physicians and Surgeons, and which, since 1887, has occupied the ground bounded by Amsterdam avenue and Fifty-ninth and Sixtieth street, extending nearly half way to Columbus avenue. The three new buildings which are to complete the aggregation of structures for the medical college are advancing. Of these, the new Vanderbilt Clinic has just been finished externally, and is ready for occupancy; the Institute of Anatomy is ready for its roof, and will be completed in the coming winter. The foundations of the new Sloane Maternity Hospital are being laid. With the construction of a one-story dynamo-room and a new boiler-room of the same height, only narrow spaces and a court yard will be left to the view of all the large plot of land contributed by William H. Vanderbilt for all the buildings.

The new edifices are being made part and parcel of the old structures, and are so united with them as to give the appearance from the street of one building. The buildings are all of red brick, with red stone trimmings, and the effect is uniform and harmonious. The new Vanderbilt Clinic is five stories high, and the old one, originally three stories high, is to be built up to the same height. The same is true as to the old and new maternity hospitals. The building to be known as the Institute of Anatomy appears to form the eastern end and integral part of the main building fronting in Fifty-ninth street. It is five stories high, of the same height as the main structure. This main building runs through to Sixtieth street, where it takes a T form, and the new clinic makes a continuous connection between this and the old clinic.

The new clinic is being erected as a gift from Cornelius, William K., Frederick W. and George W. Vanderbilt, the sum given being \$350,000 for construction and equipment. The old clinic, for which these sons of William H. Vanderbilt contributed \$250,000, proved inadequate to the demands made upon it, for in 1893 129,444 patients were treated in the dispensary, and in 1894 the number was 136,859. In the enlarged building it is calculated that abundant room will be supplied for this ever-increasing number of poor patients. Two large dark rooms with twenty stalls will be used by students of the ophthalmoscope and the laryngoscope. There is a large theatre for the clinical lectures, where 400 students can be accommodated. A smaller hall will seat 100.

A special and important feature of the new north side extensions will be the practical instruction to be given in bacteriology. The upper floor will be used for this. The course begins with the study of the relationship of bacteria to other micro-organisms, and includes methods of staining, examining and cultivating. Practical exercises in separating different species of bacteria from one another will be given, and the relationship of certain micro-organisms to disease will be taught and illustrated. Hygienic aspects of the general subject will be presented through experiments in the sterilization of infectious materials, and in other practical features. The plan is to make this department complete and thoroughly practical.

An external feature of the new clinic is a clock-tower 170 feet high from the foundations. This is to be used in place of a tank on the roof. A standpipe a foot in diameter will run up into the tower, and the force of water supply will be regulated by this modern method.

A good deal of interest centers upon the fifth floor of the new Institute of Anatomy, since this will connect directly with the fifth or top floor of the main building west of it, and thus the most extensive and the most fully equipped accommodations in the world for dissecting purposes will be secured, according to Superintendent E. A. Darling, who has charge of all the grounds and buildings of Columbia College. In the main building, or the college building proper, there are already forty-two dissecting tables in the main room, with a full equipment of tables in the prosector's rooms. In the new extension

provision is made for thirty-six additional tables. A feature of the equipment recently provided is a plant for the production of artificial cold by the anhydrous ammonia process, by means of which fresh "subjects" may be indefinitely preserved. By this cold storage system an important result is further secured in the freedom of odors and noxious smells. The department will be abundantly supplied with "human and comparative material, both mature and embryonal." Dissection can be pursued here even during the summer months, since the plant for artificial cold is utilized for cooling the rooms during the period in which the student in morphology has hitherto been obliged to suspend this branch of his studies. The accommodations will now be for 400 students and more.

It is asserted for the department of anatomy that it is now the largest in the world. The basement of the new building will contain the cast and modeling rooms, the corrosion room, and the reference osteological collection. The Museum of Human and Comparative Morphology will be on the first and second floors, while on the floor above will be the Morphological Research Laboratory, where abundant room will be afforded to the officers of the department and post-graduate students in conducting their researches. On the top floor, besides the dissecting rooms, will be a small auditorium for anatomical demonstrations. It will be lighted from overhead, and the seats will be so arranged as to afford each student a good opportunity to observe the subject of the demonstration.

As the old Vanderbilt Clinic proved too small, so with the old Sloane Maternity Hospital; the accommodations supplied by Mr. and Mrs. William D. Sloane through the gift by one of \$250,000 for the building, and of the same sum by the other for the endowment of beds, became inadequate for the demand. The new lying-in hospital will be five stories high, somewhat deeper than the old building, and will furnish seventy-two additional beds for patients, besides affording greater accommodations for the house staff and the nurses. An operating room in the new building will accommodate fifty students, and with the thirty-three beds provided in the old hospital, the total number will be 105 endowed. The new hospital will cost \$300,000, for which the money has already been given by Mr. Sloane. Mrs. Sloane has agreed to provide for the increased cost of maintenance of the hospital while she lives, and to make suitable provision in her will for its continuance after her death.

The sterilizing and disinfecting room in the new hospital is to be a model, and to embody the latest improvements for such a purpose. The teachings of this branch of bacteriology will here be put into the most thorough practical form. The main means of accomplishing the result will be a temperature of over 300 degrees Fahrenheit, which ought to mean destruction for any micro-organisms in the clothing of patients or attendants.

The arrangements for ventilating these buildings, Superintendent Darling declares, will be "simply perfect." There will be ventilating fans in the basement to force pure air up into the buildings through flues, while fans upon the tops of the buildings will exhaust the impure air from below. The boiler capacity, as well as the boiler room, is to be doubled. The lighting will be done by two 100 horse power engines running two 75 kilowatts electric generators.

A pension of a thousand dollars a year has been granted to the widow of the late Prof. Huxley.

The commission on leprosy in India has concluded its work. The commissioners have arrived at the conclusion that the alarm at the spread of leprosy in India is groundless, for they find that the number of cases of the disease has decreased.

According to Mr. Pearce Gould, "the only limit in the anatomical range of his activities that a surgeon now recognizes is the physiological one. He only asks whether he can operate without injury to the structures necessary to life, and without inflicting upon the patient greater disabilities than those caused by the disease he has to combat."

* An abstract from the *New York Tribune*.